



June 10, 2024

New Mexico Oil Conservation Division

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

**Re: Closure Request
PLU 17 Twin Wells Ranch 702H
Incident Number NAPP2335329764
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document excavation and soil sampling activities performed at the PLU 17 Twin Wells Ranch 702H (Site). The purpose of excavation and soil sampling activities, conducted in accordance with an approved Remediation Work Plan (*RWP*), was to address impacts to soil resulting from a release of produced water at the Site. XTO is submitting this *Closure Request*, describing excavation activities that have occurred and requesting no further remediation for Incident Number NAPP2335329764.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 20, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.207560°, -103.806370°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM). Site location map can be found on Figure 1.

On December 11, 2023, a produced water transfer pipeline supplying a nearby drilling rig failed, resulting in the release of 392 barrels (bbls) of produced water onto the surface of a right-of-way (ROW) and into the adjacent pasture area. No released fluids were recovered. XTO immediately reported the release to the New Mexico Oil Conservation Division (NMOCD) via email and submitted a Notification of Release (NOR) on an Initial C-141 Application (C-141) on December 19, 2023. The release was assigned Incident Number NAPP2335329764.

Ensolum conducted Site assessment and delineation activities and presented the results in the *RWP*. The *RWP* was submitted on March 7, 2024 and approved by the NMOCD on March 12, 2024. The *RWP* proposed excavation of impacted soil identified during delineation activities. Delineation sample locations are shown on Figure 2, and laboratory analytical results can be found on Table 1. The *RWP* is included in Appendix A.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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As documented in the approved *RWP*, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the pasture area that was impacted by the release, per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation.

EXCAVATION SOIL SAMPLING ACTIVITIES

Between April 3, 2024 and April 18, 2024, Ensolum personnel were at the Site to oversee excavation activities. The impacted soil was excavated from the release area as indicated by visible staining and laboratory analytical results for the delineation soil samples. Excavation activities were performed using track-mounted backhoe, hydro-vacuum truck, and transport vehicle. The excavation occurred on the surface of a ROW and into the adjacent pasture area. To direct excavation activities, 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 excavation was completed to depths ranging from 0.5 feet bgs to 4 feet bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of the impacted soil, 5-point composite soil samples were collected at least every 500 square feet from the floor and sidewalls of the excavation as per the approved sampling variance in the *RWP*. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS61 were collected from the floor of the excavation at depths ranging from 0.5 feet to 4 feet bgs. Composite soil samples SW01 through SW17 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. The excavation extent and confirmation soil sample locations were mapped utilizing a Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation of the final excavation extent is provided in Appendix B.

The excavation soil samples were placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following contaminants of concern (COCs): 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 SM4500.

The excavation extent measured approximately 29,600 square feet in areal extent. A total of approximately 3,500 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the OWL Landfill Services, LLC in Jal, New

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Mexico. Upon completion of excavation activities and receipt of final laboratory analytical results, the excavation was backfilled with locally procured topsoil and the area was restored to its original condition. Following backfill activities, the disturbed area was graded and contoured to match the surrounding topography.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all excavation floor and sidewall samples indicated COC concentrations were compliant with the Closure Criteria and reclamation requirement, where applicable. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix C.

RECLAMATION ACTIVITIES

Upon completion of excavation activities and receipt of final laboratory analytical results, the excavation was backfilled and the area was restored to its original condition. The excavation area was backfilled with locally procured topsoil. Following backfill activities, the disturbed area was graded and contoured to match the surrounding topography.

One representative 5-point composite sample (BF01) was collected from the backfill material. The backfill soil sample was handled and analyzed following the same procedures as described above. Laboratory analytical results for the backfill soil sample confirmed compliance with the NMOCD requirement 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. The laboratory analytical results are summarized in the attached Table 1 and the complete laboratory analytical report is included as Appendix C.

The disturbed pasture area will be seeded with the BLM seed mix #2 at the rate specified in pounds of pure live seed (PLS) per acre.

Species/Cultivar	PLS/Acre
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sand love grass (<i>Eragrostis trichodes</i>)	1.0
Plains bristlegrass (<i>Setaria macrostachya</i>)	2.0

The seed mix will be applied via drill seeding or broadcast seeding. If broadcast seeding is selected, the PLS/acre will be doubled, and the seed will be raked in by chaining or dragging the Site. Reclamation activities will be documented with photographs and will be timestamped with Global Positioning System (GPS) data in decimal degrees.

The Site will be monitored for vegetation growth to ensure 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 BLM seed mix will be applied.

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- Noxious and invasive weeds will be identified and treated by licensed contracted herbicide applicator or mechanically removed.

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

CLOSURE REQUEST

As outlined in the approved *RWP*, excavation activities were conducted at the Site to address the December 11, 2023, release of produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Closure Criteria and reclamation requirements, where applicable. Based on the soil sample laboratory analytical results, no further remediation is required. The excavation has been backfilled with material purchased locally and the Site has been recontoured to match pre-existing site conditions.

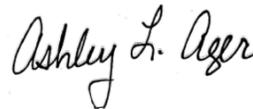
Excavation of impacted soil has mitigated impacts at the Site. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2335329764.

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

Sincerely,
Ensolum, LLC



Tracy Hillard
Staff Engineer



Ashley L. Ager, M.S., P.G.
Principal

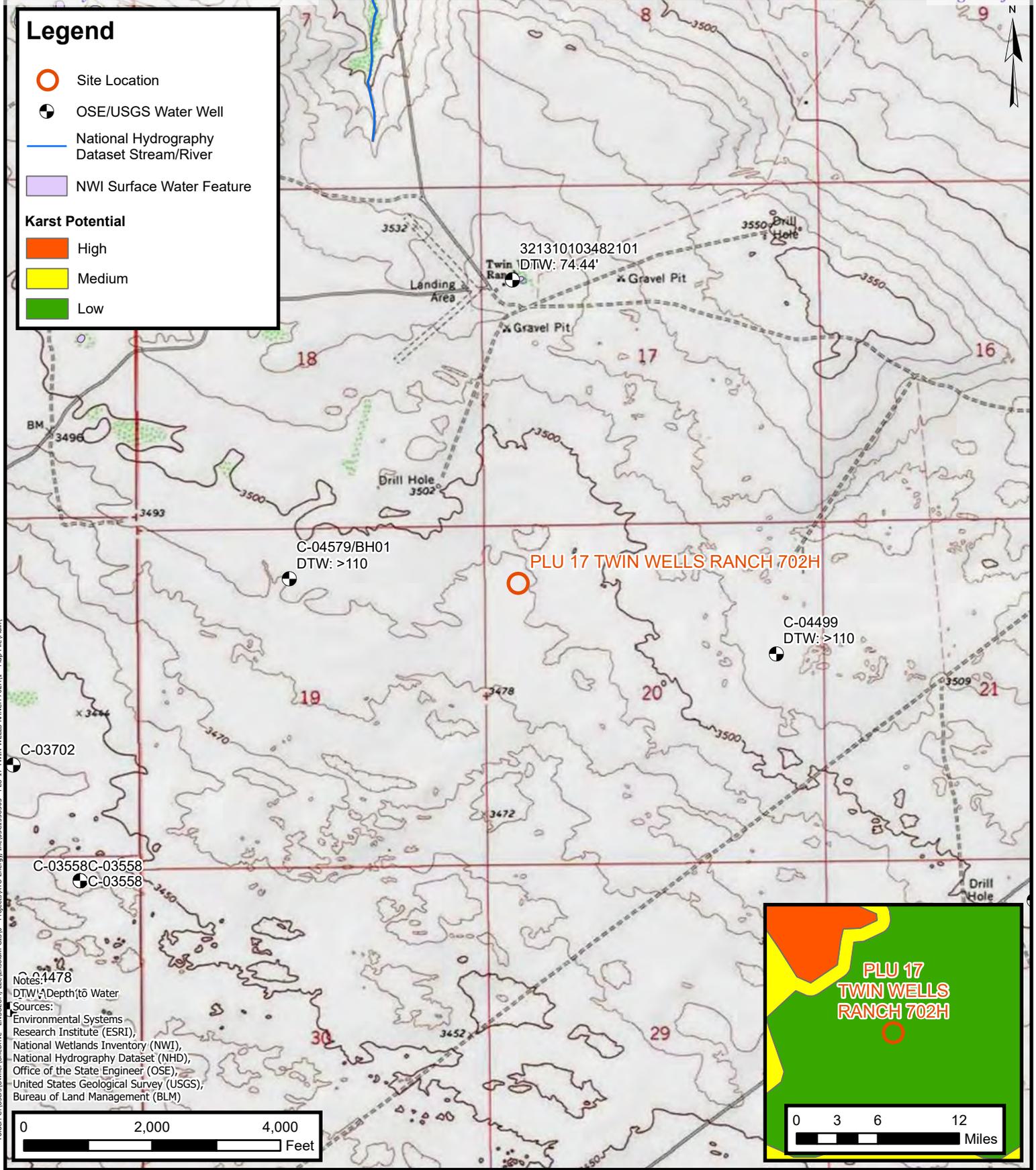
cc: Amy Ruth, XTO
Amanda Garcia, XTO
BLM

Appendices:

- Figure 1 Site Receptor Map
- Figure 2 Delineation Soil Sample Locations
- Figure 3 Excavation Soil Sample Locations
- Table 1 Soil Sample Analytical Results
- Appendix A March 7, 2024, *Remediation Work Plan*
- Appendix B Photographic Log
- Appendix C Laboratory Analytical Reports & Chain-of-Custody Documentation



FIGURES

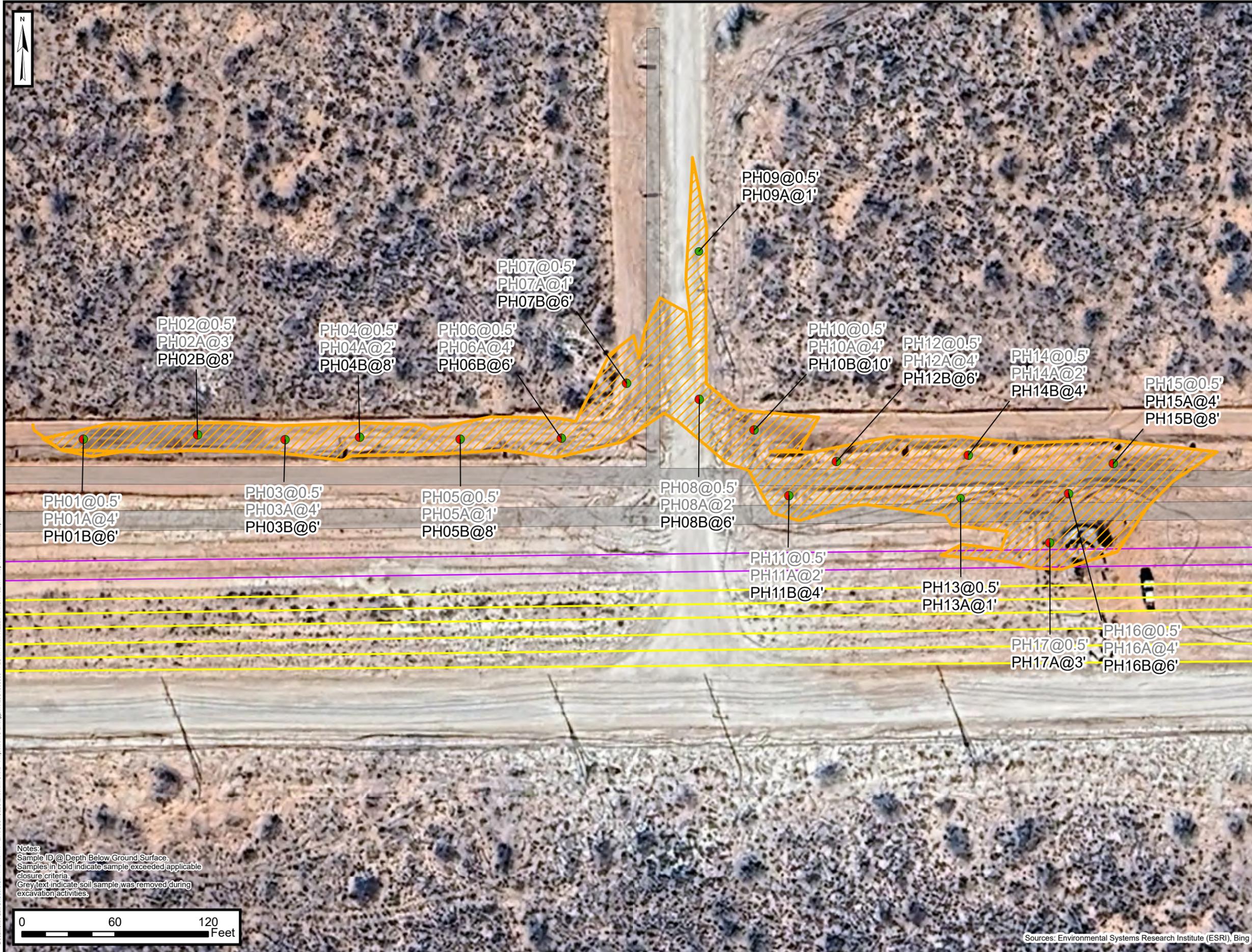


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ENSOLUM
Environmental, Engineering and
Hydrogeologic Consultants

Site Receptor Map
XTO Energy, Inc.
PLU 17 TWIN WELLS RANCH 702H
Incident Number: NAPP2335329764
Unit D, Section 20, T24S, R31E
Eddy County, New Mexico

FIGURE
1



Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- ● Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Oil and Gas Utility Line
- Water Utility Line
- Buried Pipeline Corridor
- Release Extent

Delineation Soil Sample Locations

XTO Energy, Inc.
 PLU 17 TWIN WELLS RANCH 702H
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 Unit D, Section 20, T24S, R31E
 Eddy County, New Mexico

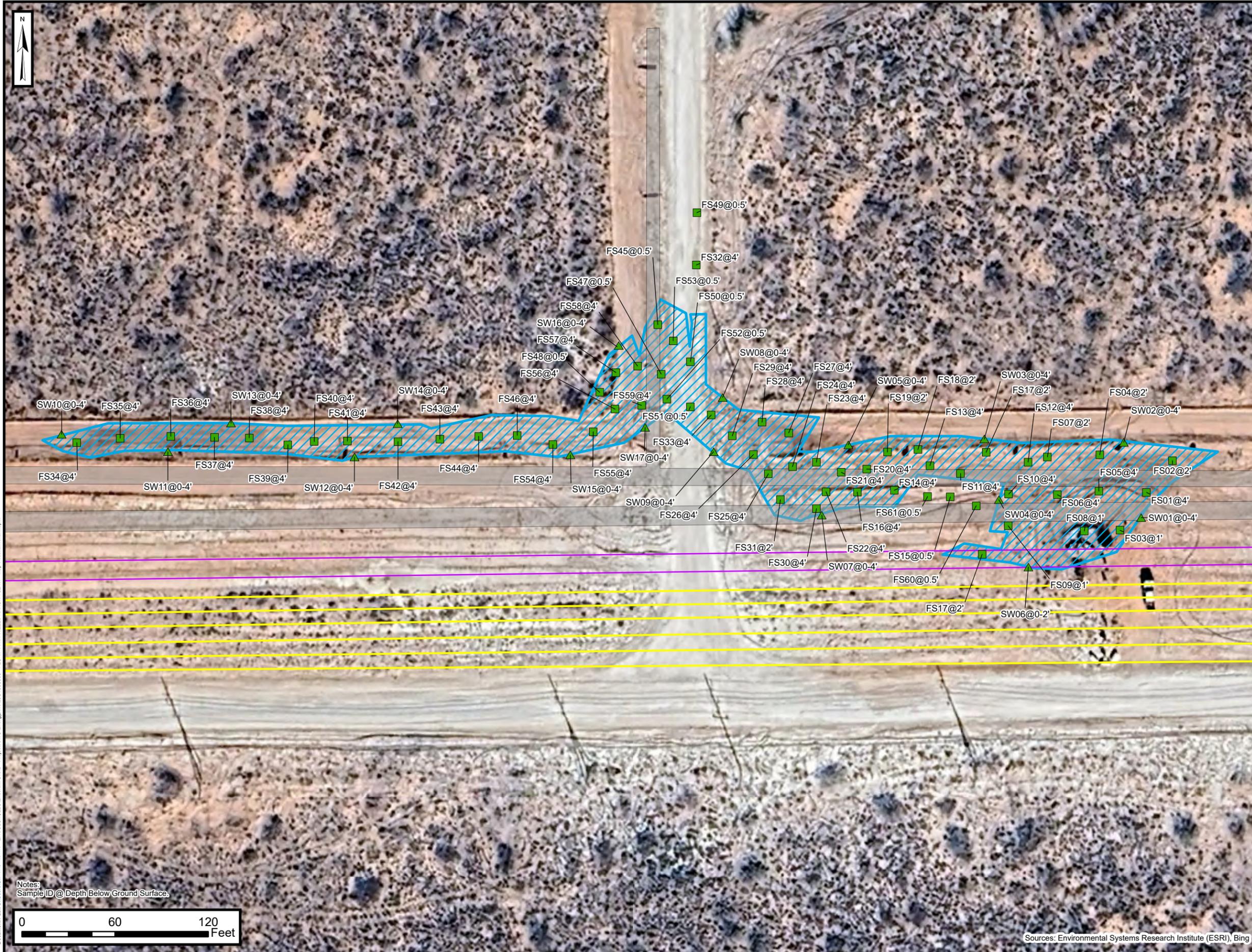
FIGURE 2



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



Sources: Environmental Systems Research Institute (ESRI), Bing



Legend

- Excavation Floor Sample in Compliance with Closure Criteria
- ▲ Excavation Sidewall Sample in Compliance with Closure Criteria
- Electric Utility Line
- Oil and Gas Utility Line
- Water Utility Line
- ▨ Excavation Extent
- Buried Pipeline Corridor

Excavation Soil Sample Locations

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 Unit D, Section 20, T24S, R31E
 Eddy County, New Mexico

FIGURE 3



Notes:
 Sample ID @ Depth Below Ground Surface.



Sources: Environmental Systems Research Institute (ESRI), Bing



TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 17 Twin Wells Ranch 702H
XTO Energy, Inc
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Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
PH01	01/12/2024	0.5	<0.00204	<0.00402	<49.7	<49.7	<49.7	<49.7	<49.7	2,450
PH01A	01/12/2024	4	<0.00204	<0.00402	<50.4	<50.4	<50.4	<50.4	<50.4	5,630
PH01B	01/12/2024	6	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	180
PH02	01/12/2024	0.5	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	2,150
PH02A	01/12/2024	3	<0.00200	<0.00399	<49.6	<49.6	<49.6	<49.6	<49.6	4,420
PH02B	01/12/2024	8	<0.00200	<0.00401	<49.6	<49.6	<49.6	<49.6	<49.6	334
PH03	01/12/2024	0.5	<0.00199	<0.00398	<50.3	<50.3	<50.3	<50.3	<50.3	2,570
PH03A	01/12/2024	1	<0.00198	<0.00396	<50.3	<50.3	<50.3	<50.3	<50.3	2,560
PH03B	01/12/2024	8	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	19.2
PH04	01/12/2024	0.5	<0.00200	<0.00399	<50.2	<50.2	<50.2	<50.2	<50.2	1,940
PH04A	01/12/2024	2	<0.00204	<0.00402	<50.4	<50.4	<50.4	<50.4	<50.4	2,220
PH04B	01/12/2024	8	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	90.3
PH05	01/12/2024	0.5	<0.00199	<0.00398	70.8	<49.6	<49.6	70.8	70.8	2,290
PH05A	01/12/2024	1	<0.00198	<0.00396	<50.4	<50.4	<50.4	<50.4	<50.4	6,910
PH05B	01/12/2024	8	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	483
PH06	01/12/2024	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	1,970
PH06A	01/12/2024	4	<0.00200	0.00426	<49.9	<49.9	<49.9	<49.9	<49.9	3,560
PH06B	01/12/2024	6	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	174
PH07	01/16/2024	0.5	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	2,520
PH07A	01/16/2024	1	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	2,230
PH07B	01/16/2024	6	<0.00201	<0.00402	<49.6	<49.6	<49.6	<49.6	<49.6	120
PH08	01/16/2024	0.5	<0.00202	<0.00403	<49.6	<49.6	<49.6	<49.6	<49.6	2,270
PH08A	01/16/2024	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	2,910
PH08B	01/16/2024	6	<0.00200	<0.00399	<50.2	<50.2	<50.2	<50.2	<50.2	111
PH09	01/17/2024	0.5	<0.00201	<0.00402	<50.4	<50.4	<50.4	<50.4	<50.4	42.9
PH09A	01/17/2024	1	<0.00202	<0.00403	<50.5	<50.5	<50.5	<50.5	<50.5	19.0
PH10	01/16/2024	0.5	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	2,680
PH10A	01/16/2024	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	1,150
PH10B	01/16/2024	10	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	89.5



**TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 17 Twin Wells Ranch 702H
XTO Energy, Inc
Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
PH11	01/17/2024	0.5	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	2,460
PH11A	01/17/2024	2	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	2,920
PH11B	01/17/2024	4	<0.00200	<0.00399	<50.5	<50.5	<50.5	<50.5	<50.5	12.3
PH12	01/17/2024	0.5	<0.00201	<0.00402	<50.5	<50.5	<50.5	<50.5	<50.5	2,570
PH12A	01/17/2024	4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	5,540
PH12B	01/17/2024	6	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	454
PH13	01/17/2024	0.5	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	6.48
PH13A	01/17/2024	1	<0.00200	<0.00399	<50.2	<50.2	<50.2	<50.2	<50.2	8.33
PH14	01/17/2024	0.5	<0.00201	<0.00402	<50.4	<50.4	<50.4	<50.4	<50.4	1,590
PH14A	01/17/2024	2	<0.00200	<0.00401	<50.1	<50.1	<50.1	<50.1	<50.1	947
PH14B	01/17/2024	4	<0.00199	<0.00398	<49.9	65.4	<49.9	65.4	65.4	727
PH15	01/17/2024	0.5	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	3,980
PH15A	01/17/2024	4	<0.00200	<0.00399	<49.7	<49.7	<49.7	<49.7	<49.7	2,500
PH15B	01/17/2024	8	<0.00201	<0.00402	<50.1	<50.1	<50.1	<50.1	<50.1	92.2
PH16	01/17/2024	0.5	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	1,710
PH16A	01/17/2024	4	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	3,070
PH16B	01/17/2024	6	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	25.0
PH17	01/17/2024	0.5	<0.00201	<0.00402	<49.6	<49.6	<49.6	<49.6	<49.6	2,680
PH17A	01/17/2024	3	<0.00200	<0.00401	<49.6	<49.6	<49.6	<49.6	<49.6	26.6
Confirmation Soil Samples										
FS01	04/08/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS02	04/08/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS03	04/08/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
FS04	04/08/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS05	04/08/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,170
FS06	04/08/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	624
FS07	04/10/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS08	04/10/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS09	04/10/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS10	04/10/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,360



**TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 17 Twin Wells Ranch 702H
XTO Energy, Inc
Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
FS11	04/10/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,150
FS12	04/10/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	704
FS13	04/10/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,340
FS14	04/10/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
FS15	04/10/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS16	04/10/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	608
FS17	04/10/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS18	04/10/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS19	04/10/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS20	04/10/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	928
FS21	04/11/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
FS22	04/11/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,230
FS23	04/11/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,120
FS24	04/11/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,880
FS25	04/11/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,090
FS26	04/11/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
FS27	04/11/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS28	04/11/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,840
FS29	04/11/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,440
FS30	04/11/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS31	04/11/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS32	04/12/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
FS33	04/12/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,680
FS34	04/12/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,689
FS35	04/12/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,410
FS36	04/12/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,760
FS37	04/12/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,080
FS38	04/15/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,760
FS39	04/15/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,260
FS40	04/15/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,240
FS41	04/15/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,600



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 17 Twin Wells Ranch 702H
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
FS42	04/16/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,760
FS43	04/16/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,640
FS44	04/16/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	704
FS45	04/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS46	04/16/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,040
FS47	04/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS48	04/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
FS49	04/17/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16
FS50	04/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
FS51	04/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
FS52	04/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS53	04/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS54	04/16/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,560
FS55	04/16/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,000
FS56	04/16/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,240
FS57	04/16/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,720
FS58	04/16/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,080
FS59	04/16/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,040
FS60	04/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS61	04/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW01	04/10/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW02	04/10/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW03	04/10/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW04	04/10/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW05	04/10/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW06	04/10/2024	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SW07	04/11/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW08	04/11/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW09	04/11/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW10	04/15/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SW11	04/15/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0



**TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 17 Twin Wells Ranch 702H
XTO Energy, Inc
Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
SW12	04/15/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW13	04/15/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW14	04/16/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW15	04/16/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW16	04/16/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW17	04/16/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	496.0
Backfill Soil Sample										
BF01	04/17/2024	N/A	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities



APPENDIX A

March 7, 2024, *Remediation Work Plan*



March 7, 2024

New Mexico Oil Conservation Division

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

**Re: Remediation Work Plan and Variance Request
PLU 17 Twin Wells Ranch 702H
Incident Number NAPP2335329764
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Remediation Work Plan (Work Plan)* to document assessment and delineation activities completed to date and propose remedial actions to address impacted soil identified at the PLU 17 Twin Wells Ranch 702H (Site). The purpose of the Site assessment and delineation activities was to determine the presence or absence of impacted soil resulting from a release of produced water at the Site. The following *Work Plan* proposes to excavate impacted soil and requests variances for Closure Criteria and confirmation soil sampling frequency.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 20, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.207560°, -103.806370°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On December 11, 2023, a produce water transfer pipeline supplying a nearby drilling rig failed, resulting in the release of 392 barrels (bbls) of produced water onto the surface of a right-of-way (ROW) and into the adjacent pasture area. No released fluids were recovered. XTO immediately reported the release to the New Mexico Oil Conservation Division (NMOCD) via email and submitted a Notification of Release (NOR) on an Initial C-141 Application (C-141) on December 19, 2023. The release was assigned Incident Number NAPP2335329764.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a soil boring drilled for determination of regional groundwater depth. In August 2023, a soil boring permitted by New Mexico Office of the State Engineer (NMOSE file number C-04759) was completed approximately 0.57 miles west of the release utilizing air rotary drilling methods. Soil boring C-04759 was drilled to a depth of 110 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The soil boring was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without

XTO Energy, Inc.
Remediation Work Plan
PLU 17 Twin Wells Ranch 702H

observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The Well Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a freshwater emergent wetland, located approximately 4,733 feet north of the Site. The Site is greater than 200 feet from any 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). Potential Site receptors are identified on Figure 1.

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

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

Based on the lack of sensitive receptors at the Site, a low potential karst designation, and surrounding nearby depth to groundwater data estimating regional depth to groundwater greater than 100 feet bgs, XTO is requesting NMOCD consider a variance to its guidance that depth to groundwater determination be restricted to data from wells within ½-mile of the release. The nearest depth-to-groundwater data includes the above-mentioned soil boring C-04759 that documents dry conditions to at least 110 feet bgs. The boring was located 0.57 miles west of the release, just outside the preferred ½-mile radius. A second nearby dry soil boring, C-04499, is located 0.73 miles in the opposite direction (east) of the release, confirming groundwater is not present above 100 feet bgs in the general area of the Site. The data points are current, as C-04759 was drilled in August 2023 and C-04499 was drilled December 2020. The next nearest data point is United States Geological Survey (USGS) well 321310103482101 located 0.86 miles north of the release with a recorded depth to water of 74.44 feet bgs. However, the last recorded depth to groundwater measurement was collected in January 2013 and the well is listed as an “Inactive Site” on the USGS National Water Information System Mapper. There is an indication that this well went dry, as the previously recorded measurements demonstrated an increasing depth to groundwater with time. The USGS well is also located in a potential historic stock pond (currently dry) and may have been influenced by surface water storage in the past. The closest groundwater well data has reasonably estimated depth to groundwater at the Site as greater than 100 feet. If boring C-04759 had been drilled 300 feet closer to the release, it would be accepted. There is no evidence suggesting the 300-foot makes any difference in the subsurface hydrogeology, and therefore is equally protective of the public, the environment, and groundwater. Based on the above-mentioned findings, XTO requests the estimated depth to groundwater at the Site be accepted. All Well Logs used for the depth to groundwater investigation are included in Appendix A.

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applied to the top 4 feet of pasture area that was impacted by the release, per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation.

XTO Energy, Inc.
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SITE ASSESSMENT AND DELINEATION SOIL SAMPLING ACTIVITIES

Between January 12, and January 17, 2024, Ensolum personnel conducted Site assessment and delineation activities to evaluate the release extent based on information provided in the C-141 and visual observations. Seventeen potholes (PH01 through PH17) were advanced utilizing heavy equipment and a hand auger to investigate the extent of the release. The potholes were advanced to depths ranging from 1-foot to 10 feet bgs. Discrete delineation soil samples were collected from each pothole at depths ranging from 0.5 feet to 10 feet bgs. All delineation 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 delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. A photographic log of the Site assessment and delineation activities is included in Appendix B. Field screening results and observations for all potholes were logged on lithologic/soil sampling logs, which are included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Soil samples delivered to the laboratory the same day they are collected may not have equilibrated to the 6 degrees Celsius required for shipment and long-term storage but are considered by the laboratory to have been received in acceptable condition.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples indicated no hydrocarbons (BTEX and TPH) were detected in any samples. Chloride concentrations exceeded the reclamation requirement in all soil samples collected within the top 4 feet of the release extent, except PH09 and PH13. The elevated chloride concentrations ranged from 947 mg/kg in PH14A to 6,910 mg/kg in PH05A. Samples collected at 4 feet bgs and deeper met the Site Closure Criteria for chloride. Analytical results for the terminal depths of all but one (PH14) of the potholes indicated vertical definition is established between 6 and 10 feet bgs to the strictest Table I Closure Criteria standards. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical report is included in Appendix D.

PROPOSED REMEDIATION WORK PLAN

XTO proposes to remove chloride-impacted soil identified at the Site. An estimated 4,100 cubic yards of impacted soil will be removed, and the proposed excavation extent is depicted on Figure 3. Following the removal of impacted soil, confirmation samples will be collected along the floors and sidewalls of the final excavation extent. Additionally, confirmation samples will be collected where potholes PH09 and PH13 were advanced. Although these samples meet the reclamation requirement and suggest no remediation is required, all areas of the release footprint will be included as part of the confirmation sampling program.

Due to the estimated size of the excavation, XTO requests a variance for frequency of confirmation samples. XTO proposes five-point composite samples be collected at a sampling frequency of 500 square feet. The proposed sampling frequency would reduce the total amount of samples from approximately 192 samples (200 square-foot frequency) to approximately 78 samples. The quantity of samples is unlikely to reduce the ability to identify residual contaminants, especially since the strictest

XTO Energy, Inc.
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PLU 17 Twin Wells Ranch 702H

600 mg/kg chloride concentration in the reclamation requirement is being applied in the top 4 feet. No receptors will be impacted. Most of the soil in the root zone (top 4 feet) will be removed, eliminating potential impact to vegetation. Wildlife and humans are not generally affected by chloride concentrations in soil through touch or ingestion, especially at near 600 mg/kg levels. The sampling frequency of 500 square feet is sufficient to confirm impacted soil removal at this level of impact and extent, particularly since higher concentrations exist below 4 feet and have been determined to be protective of human health and environment by the NMOCD through application of Table I.

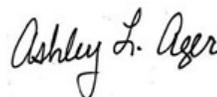
The proposed collection of sidewall confirmation soil samples will serve as horizontal definition of the release. The soil samples will be handled and analyzed for COCs as described above and submitted to Eurofins for laboratory analysis. The excavated soil will be transferred to a New Mexico approved landfill facility for disposal. The excavation will be backfilled and recontoured to match pre-existing Site conditions and the pasture area will be reseeded with a BLM-approved seed mixture.

XTO believes this *Work Plan* is protective of human health, the environment, and groundwater. As such, XTO requests approval of this *Work Plan* with variances by NMOCD. XTO will complete the excavation and soil sampling activities within 90 days of the date of approval of this *Work Plan* by the NMOCD. If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC



Benjamin J. Belill
Senior Geologist



Ashley L. Ager, MS., PG.
Principal

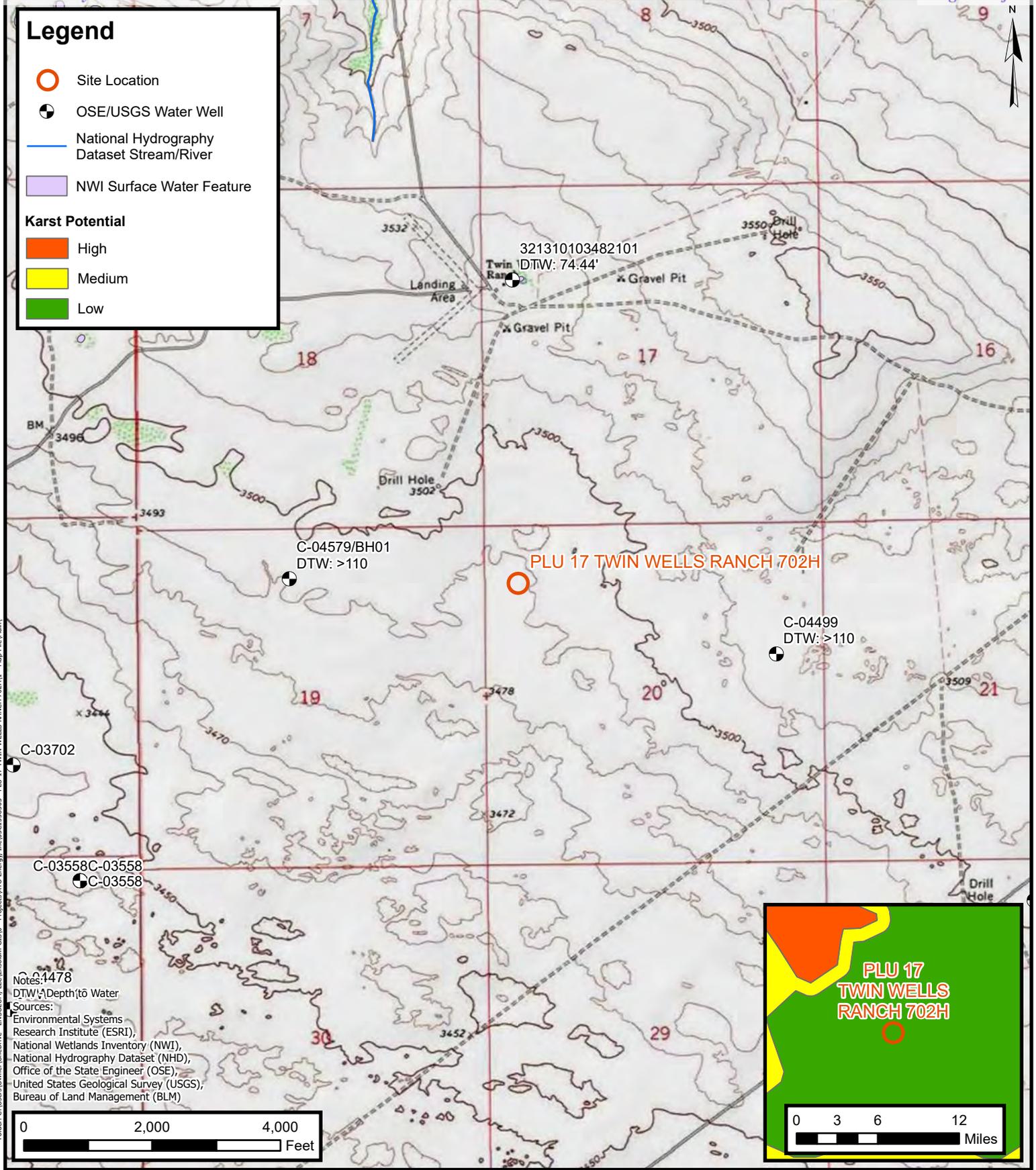
cc: Amy Ruth, XTO
Amanda Garcia, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Proposed Excavation Extent
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



FIGURES



Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558903 - PLU 17 TWIN WELLS RANCH 702H1 - Map File\Main

Notes:
 1478
 DTW: Depth to Water
 Sources:
 Environmental Systems
 Research Institute (ESRI),
 National Wetlands Inventory (NWI),
 National Hydrography Dataset (NHD),
 Office of the State Engineer (OSE),
 United States Geological Survey (USGS),
 Bureau of Land Management (BLM)

ENSOLUM
 Environmental, Engineering and
 Hydrogeologic Consultants

Site Receptor Map

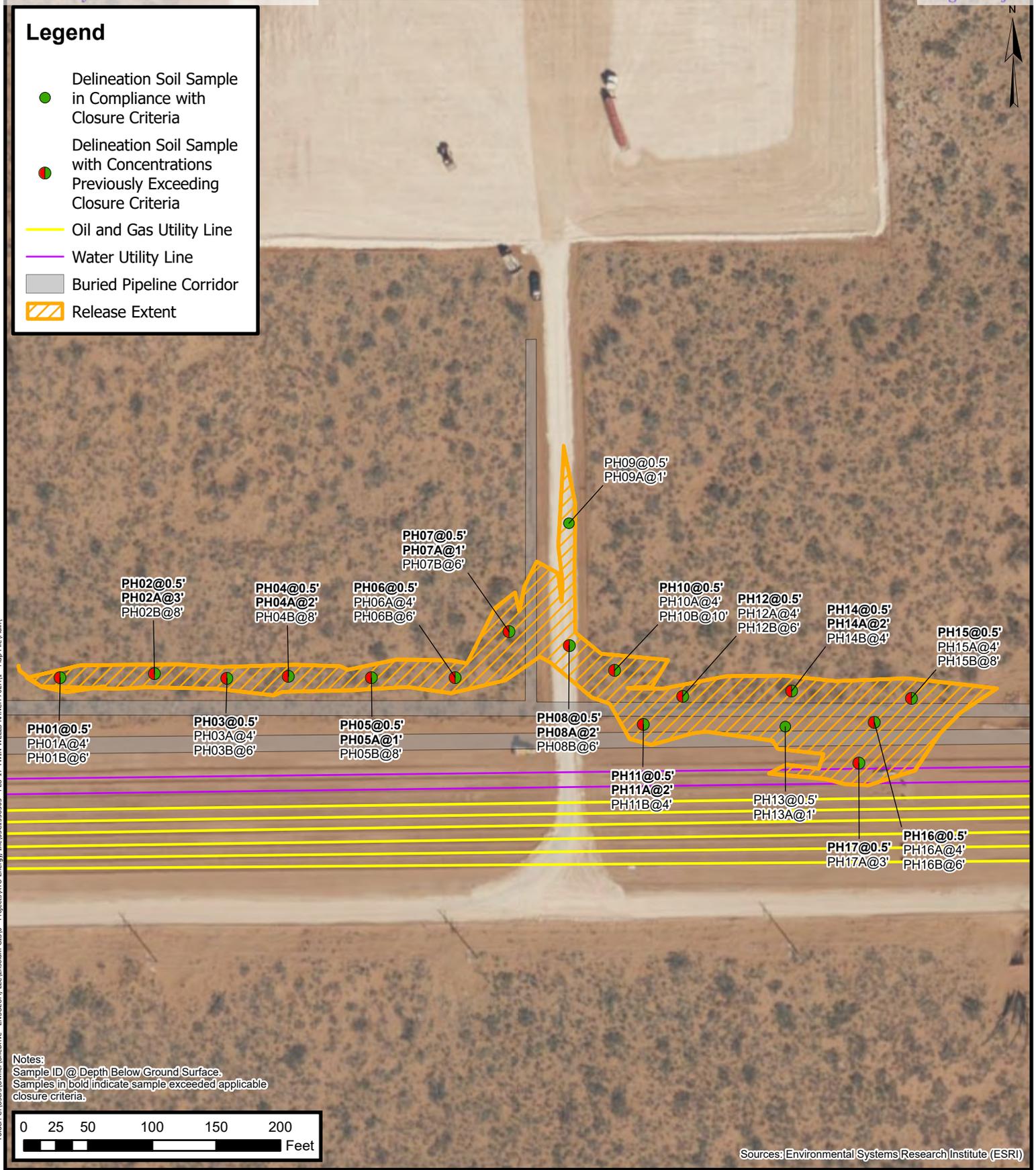
XTO Energy, Inc.
 PLU 17 TWIN WELLS RANCH 702H
 Incident Number: NAPP2335329764
 Unit D, Section 20, T24S, R31E
 Eddy County, New Mexico

FIGURE

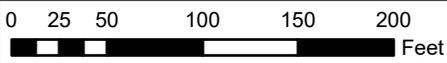
1

Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Oil and Gas Utility Line
- Water Utility Line
- Buried Pipeline Corridor
- Release Extent



Notes:
 Sample ID @ Depth Below Ground Surface.
 Samples in bold indicate sample exceeded applicable closure criteria.



Sources: Environmental Systems Research Institute (ESRI)

Delineation Soil Sample Locations

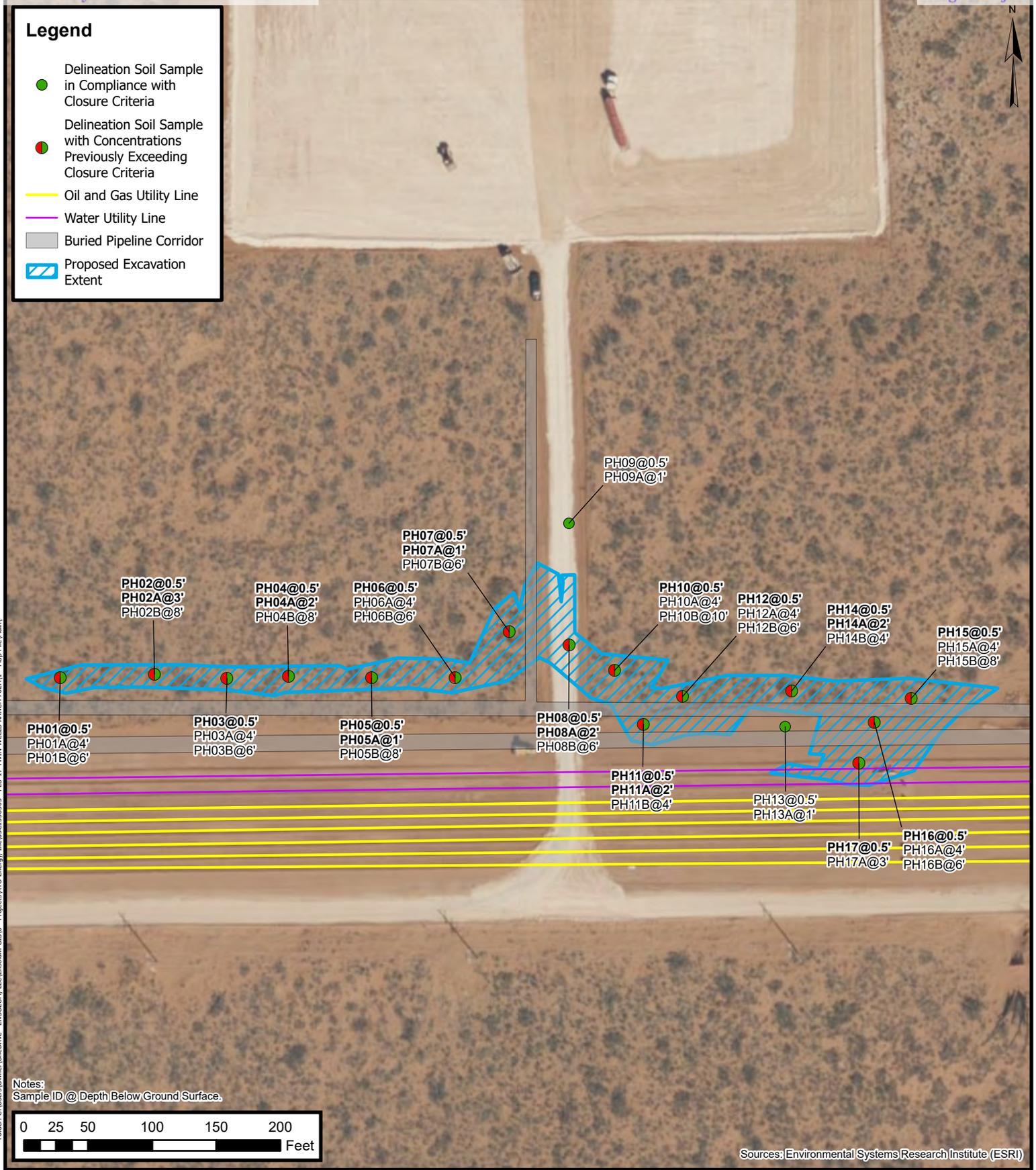
XTO Energy, Inc.
 PLU 17 TWIN WELLS RANCH 702H
 Incident Number: NAPP2335329764
 Unit D, Section 20, T24S, R31E
 Eddy County, New Mexico

FIGURE
2



Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- ● Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Oil and Gas Utility Line
- Water Utility Line
- Buried Pipeline Corridor
- Proposed Excavation Extent



Notes:
 Sample ID @ Depth Below Ground Surface.



Sources: Environmental Systems Research Institute (ESRI)



Proposed Excavation Extent

XTO Energy, Inc.
 PLU 17 TWIN WELLS RANCH 702H
 Incident Number: NAPP2335329764
 Unit D, Section 20, T24S, R31E
 Eddy County, New Mexico

FIGURE
3



TABLES

**TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 17 Twin Wells Ranch 702H
XTO Energy, Inc
Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
PH01	01/12/2024	0.5	<0.00201	<0.00402	<49.7	<49.7	<49.7	<49.7	<49.7	2,450
PH01A	01/12/2024	4	<0.00201	<0.00402	<50.4	<50.4	<50.4	<50.4	<50.4	5,630
PH01B	01/12/2024	6	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	180
PH02	01/12/2024	0.5	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	2,150
PH02A	01/12/2024	3	<0.00200	<0.00399	<49.6	<49.6	<49.6	<49.6	<49.6	4,420
PH02B	01/12/2024	8	<0.00200	<0.00401	<49.6	<49.6	<49.6	<49.6	<49.6	334
PH03	01/12/2024	0.5	<0.00199	<0.00398	<50.3	<50.3	<50.3	<50.3	<50.3	2,570
PH03A	01/12/2024	1	<0.00198	<0.00396	<50.3	<50.3	<50.3	<50.3	<50.3	2,560
PH03B	01/12/2024	8	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	19.2
PH04	01/12/2024	0.5	<0.00200	<0.00399	<50.2	<50.2	<50.2	<50.2	<50.2	1,940
PH04A	01/12/2024	2	<0.00201	<0.00402	<50.4	<50.4	<50.4	<50.4	<50.4	2,220
PH04B	01/12/2024	8	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	90.3
PH05	01/12/2024	0.5	<0.00199	<0.00398	70.8	<49.6	<49.6	70.8	70.8	2,290
PH05A	01/12/2024	1	<0.00198	<0.00396	<50.4	<50.4	<50.4	<50.4	<50.4	6,910
PH05B	01/12/2024	8	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	483
PH06	01/12/2024	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	1,970
PH06A	01/12/2024	4	<0.00200	0.00426	<49.9	<49.9	<49.9	<49.9	<49.9	3,560
PH06B	01/12/2024	6	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	174
PH07	01/16/2024	0.5	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	2,520
PH07A	01/16/2024	1	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	2,230
PH07B	01/16/2024	6	<0.00201	<0.00402	<49.6	<49.6	<49.6	<49.6	<49.6	120
PH08	01/16/2024	0.5	<0.00202	<0.00403	<49.6	<49.6	<49.6	<49.6	<49.6	2,270
PH08A	01/16/2024	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	2,910
PH08B	01/16/2024	6	<0.00200	<0.00399	<50.2	<50.2	<50.2	<50.2	<50.2	111
PH09	01/17/2024	0.5	<0.00201	<0.00402	<50.4	<50.4	<50.4	<50.4	<50.4	42.9
PH09A	01/17/2024	1	<0.00202	<0.00403	<50.5	<50.5	<50.5	<50.5	<50.5	19.0
PH10	01/16/2024	0.5	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	2,680
PH10A	01/16/2024	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	1,150
PH10B	01/16/2024	10	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	89.5
PH11	01/17/2024	0.5	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	2,460
PH11A	01/17/2024	2	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	2,920

**TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 17 Twin Wells Ranch 702H
XTO Energy, Inc
Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCOD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
PH11B	01/17/2024	4	<0.00200	<0.00399	<50.5	<50.5	<50.5	<50.5	<50.5	12.3
PH12	01/17/2024	0.5	<0.00201	<0.00402	<50.5	<50.5	<50.5	<50.5	<50.5	2,570
PH12A	01/17/2024	4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	5,540
PH12B	01/17/2024	6	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	454
PH13	01/17/2024	0.5	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	6.48
PH13A	01/17/2024	1	<0.00200	<0.00399	<50.2	<50.2	<50.2	<50.2	<50.2	8.33
PH14	01/17/2024	0.5	<0.00201	<0.00402	<50.4	<50.4	<50.4	<50.4	<50.4	1,590
PH14A	01/17/2024	2	<0.00200	<0.00401	<50.1	<50.1	<50.1	<50.1	<50.1	947
PH14B	01/17/2024	4	<0.00199	<0.00398	<49.9	65.4	<49.9	65.4	65.4	727
PH15	01/17/2024	0.5	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	3,980
PH15A	01/17/2024	4	<0.00200	<0.00399	<49.7	<49.7	<49.7	<49.7	<49.7	2,500
PH15B	01/17/2024	8	<0.00201	<0.00402	<50.1	<50.1	<50.1	<50.1	<50.1	92.2
PH16	01/17/2024	0.5	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	1,710
PH16A	01/17/2024	4	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	3,070
PH16B	01/17/2024	6	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	25.0
PH17	01/17/2024	0.5	<0.00201	<0.00402	<49.6	<49.6	<49.6	<49.6	<49.6	2,680
PH17A	01/17/2024	3	<0.00200	<0.00401	<49.6	<49.6	<49.6	<49.6	<49.6	26.6

Notes:

- bgs: below ground surface
- mg/kg: milligrams per kilogram
- NMOCOD: New Mexico Oil Conservation Division
- BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
- Concentrations in **bold** exceed the NMOCOD Table I Closure Criteria or reclamation requirement where applicable.
- GRO: Gasoline Range Organics
- DRO: Diesel Range Organics
- ORO: Oil Range Organics
- TPH: Total Petroleum Hydrocarbon
- NMAC: New Mexico Administrative Code
- Grey text indicates soil sample removed during excavation activities



APPENDIX A

Referenced Well Records

		Sample Name: C-4759 (BH01)		Date: 8/07/2023				
		Site Name: PLU 18 TWR SAT BATTERY						
		Incident Number: nAPP2230551957						
		Job Number: 03C1558144						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.207892, -103.817942			Logged By: M. O'Dell		Method: Air Rotary Rig			
			Hole Diameter: N/A		Total Depth: 110'			
Comments: No field screening or sampling was conducted at the site.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
						10	SP	0-10'. Sand w/ trace caliche. Reddish brown, very fine to fine grained, subrounded to subangular, poorly graded, dry.
						20	CCHE	10-40'. Caliche w/ sand. Light brown to tan, very fine to fine grained, subrounded to subangular, poorly graded, dry.
						30		
						40	SP	40-100'. Sand w/ trace caliche. Reddish brown, very fine to fine grained, subrounded to subangular grains, poorly graded, dry.
						50		50': Injecting/adding water & soap at 50'
						60		
						70		
						80		
						90		
						100	SP/SC	100-110'. Clayey sand, reddish orange very fine to fine grained, poorly graded, dry.
						110		110': stopped drilling and set casing at 110'.
TD @ 110' bgs.								



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1 (MW-1)		WELL TAG ID NO. n/a		OSE FILE NO(S). C-4499			
	WELL OWNER NAME(S) XTO Energy (Kyle Littrell)				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 6401 Holiday Hill Dr.				CITY Midland	STATE TX	ZIP 79707	
	WELL LOCATION (FROM GPS)	LATITUDE	DEGREES 32°	MINUTES 12'	SECONDS 15.89"	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84	
		LONGITUDE	-103°	47'	36.29"	W		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SE NE Sec. 20 T24S R31E								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 12/30/2020	DRILLING ENDED 12/30/2020	DEPTH OF COMPLETED WELL (FT) temporary well material		BORE HOLE DEPTH (FT) 110	DEPTH WATER FIRST ENCOUNTERED (FT) n/a		
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a		
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	110	±8.5	Boring- HSA	-	-	-	-
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/30/17)			
FILE NO.	C-4499	POD NO.	1	TRN NO.	182532
LOCATION	24S.31E.20.243		WELL TAG ID NO.	—	PAGE 1 OF 2

DSE DIT JAN 27 2021 PM3:34



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Agency code = usgs
site_no list =

- 321310103482101

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 321310103482101 24S.31E.17.13120

Eddy County, New Mexico
Latitude 32°13'14.1", Longitude 103°48'23.4" NAD83
Land-surface elevation 3,530.00 feet above NGVD29
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1959-02-03			D 62610		3459.50	NGVD29	P	Z		
1959-02-03			D 62611		3461.24	NAVD88	P	Z		
1959-02-03			D 72019	70.50			P	Z		
1959-03-25			D 62610		3462.33	NGVD29	1	Z		
1959-03-25			D 62611		3464.07	NAVD88	1	Z		
1959-03-25			D 72019	67.67			1	Z		
1976-12-02			D 62610		3463.98	NGVD29	1	Z		
1976-12-02			D 62611		3465.72	NAVD88	1	Z		
1976-12-02			D 72019	66.02			1	Z		
2013-01-17	21:00 UTC		m 62610		3455.56	NGVD29	1	S	USGS	
2013-01-17	21:00 UTC		m 62611		3457.30	NAVD88	1	S	USGS	
2013-01-17	21:00 UTC		m 72019	74.44			1	S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day

Section	Code	Description
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	P	Pumping
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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0.3 0.26 nadww02





APPENDIX B

Photographic Log

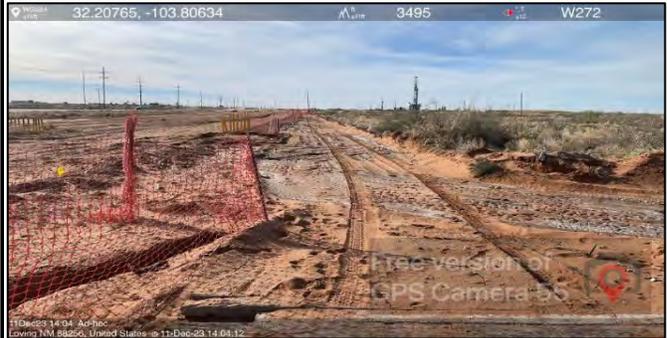


Photographic Log

XTO Energy, Inc
PLU 17 Twin Wells Ranch 702H
Incident Number NAPP2335329764



Photograph: 1 Date: 12/11/2023
Description: Soil staining near release point.
View: Northwest



Photograph: 2 Date: 12/11/2023
Description: Soil staining along right-of-way.
View: West



Photograph: 3 Date: 1/12/2024
Description: Release area near pipeline corridor.
View: West



Photograph: 4 Date: 1/17/2024
Description: Delineation activities, PH15.
View: Southwest



APPENDIX C

Lithologic Soil Sampling Logs

				Sample Name: PH01		Date: 1/12/24		
				Site Name: PLU 17 Twin Wells Ranch 702H				
				Incident Number: NAPP2335329764				
				Job Number: 03C1558303				
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: MR		Method: Backhoe		
Coordinates: 32.207662, -103.807542				Hole Diameter: ~2'		Total Depth: 6'		
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	3,758	27.6	Y	PH01	0.5	0	SP-SM	0-2' SAND with silt, medium brown, medium to fine grained. Poorly sorted, no stain past 0.5', no odor, moist.
M	4,094	22.2	N				1	
M	5,684	25.1	N			2		2-5' SAA, reddish color.
M	7,230	12.1	N			3		
M	7,829	16.6	N	PH01A	4	4		
						5	CCHE	5-6' CALICHE, light to medium brown, coarse grained, sub-rounded grains, no stain, no odor, dry.
D	274	0.2	N	PH01B	6	6 TD		Total Depth @ 6' bgs.

				Sample Name: PH02		Date: 1/12/24		
				Site Name: PLU 17 Twin Wells Ranch 702H				
				Incident Number: NAPP2335329764				
				Job Number: 03C1558303				
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: MR		Method: Backhoe		
Coordinates: 32.207667, -103.807305				Hole Diameter: ~2'		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. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	2,638	28.2	Y	PH02	0.5	0	SP-SM	0-2' SAND with silt, medium brown, medium to fine grained, poorly sorted, no stain past 0.5', no odor, moist.
M	4,094	14.1	N		1			
M	3,259	15.7	N		2			
M	5,242	13.6	N		3	3		
M	3,153	5.6	N	PH02A	4			2-5' SAA, red-brown color.
					5	5	CCHE	
D	862	2.3	N		6	6		
					7			
D	364	0.6	N	PH02B	8	8		5-8' CALICHE, light to medium brown, coarse grained, sub-rounded grains, no stain, no odor, dry.
					TD		Total Depth @ 8' bgs.	

				Sample Name: PH03		Date: 1/12/24		
				Site Name: PLU 17 Twin Wells Ranch 702H				
				Incident Number: NAPP2335329764				
				Job Number: 03C1558303				
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: MR		Method: Backhoe		
Coordinates: 32.207657, -103.807122				Hole Diameter: ~2'		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. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
			Y			0	SP-SM	0-2' SAND with silt, medium brown, medium to fine grained, poorly sorted, no stain past 0.5', no odor, moist.
M	4,452	19.8		PH03	0.5			
M	4,833	13.2	N	PH03A	1	1		
M	3,259	11.5	N			2		
M	4,094	12.6	N			3		
M	2,005	7.2	N			4		2-5' SAA, red-brown color.
						5	CCHE	
D	526	1.1	N			6		
						7		5-8' CALICHE, light to medium brown, coarse grained, sub-rounded grains, no stain, no odor, dry.
D	<168	0.2	N	PH03B	8	8		
						TD		Total Depth @ 8' bgs.

		Sample Name: PH04		Date: 1/12/24				
		Site Name: PLU 17 Twin Wells Ranch 702H						
		Incident Number: NAPP2335329764						
		Job Number: 03C1558303						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.207659, -103.806967			Logged By: MR		Method: Backhoe			
			Hole Diameter: ~2'		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. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	4,094	16.2	Y	PH04	0.5	0	SP-SM	0-6' SAND with silt, medium brown, medium to fine grained, poorly sorted, no stain past 0.5', no odor, moist.
M	3,259	7.1	N		1			
M	4,452	3.2	N		2	2		
M	2,464	0.6	N		3			
M	4,094	0.7	N	PH04A	4	4	CCHE	6-8' CALICHE, some sand, light to medium brown, coarse, sub-rounded grains, no stain, no odor, dry.
					5			
D	650	0.2	N		6	7		
D	<168	0.0	N		8	8		
					TD			8' CALICHE, white, coarse and sub-rounded grains, no stain, no odor, dry.
								Total Depth @ 8' bgs.

					Sample Name: PH05		Date: 1/12/24	
					Site Name: PLU 17 Twin Wells Ranch 702H			
					Incident Number: NAPP2335329764			
					Job Number: 03C1558303			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: MR		Method: Backhoe	
Coordinates: 32.207654, -103.806757					Hole Diameter: ~2'		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. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	3,259	24.1	Y	PH05	0.5	0	SP-SM	0-6' SAND with silt, medium brown, medium to fine grained, poorly sorted, no stain past 0.5', no odor, moist.
M	10,870	25.2	N	PH05A	1	1		
M	3,153	18.9	N			2		
M	2,296	2.7	N			3		
M	4,094	1.8	N			4		
						5	CCHE	6-8' CALICHE, some sand, light to medium brown, coarse, sub-rounded grains, no stain, no odor, dry.
D	650	0.5	N			6		
						7		
D	274.4	0.3	N	PH05B	8	8		8' CALICHE, white, coarse and sub-rounded grains, no stain, no odor, dry.
						TD		Total Depth @ 8' bgs.

					Sample Name: PH06		Date: 1/12/24	
					Site Name: PLU 17 Twin Wells Ranch 702H			
					Incident Number: NAPP2335329764			
					Job Number: 03C1558303			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: MR		Method: Backhoe	
Coordinates: 32.207653, -103.806547					Hole Diameter: ~2'		Total Depth: 6'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	3,035	12.7	Y	PH06	0.5	0	SP-SM	0-6' SAND with silt, red brown, medium to fine grained. Poorly sorted, no stain past 0.5', no odor, moist.
M	2,828	5.9	N		1			
M	2,296	0.6	N		2			
M	2,638	0.5	N		3			
M	7,829	0.6	N		4			
				PH06A	4	4		
					5			
D	202	0.2	N	PH06B	6	6	CCHE	6' CALICHE with sand, medium brown, coarse grained, sub-rounded grains, no stain, no odor, dry.
						TD		Total Depth @ 6' bgs.

					Sample Name: PH07		Date: 1/16/24	
					Site Name: PLU 17 Twin Wells Ranch 702H			
					Incident Number: NAPP2335329764			
					Job Number: 03C1558303			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: MR		Method: Backhoe	
Coordinates: 32.207750, -103.806409					Hole Diameter: ~2'		Total Depth: 6'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	2,828	2.3	Y	PH07	0.5	0	SP-SM	0-6' SAND with silt, medium brown, medium to fine grained. Poorly sorted, no stain past 0.5', no odor, moist.
M	3,511	0.2	N	PH07A	1	1		
M	3,259	0.6	N			2		
M	3,035	0.7	N			3		
M	2,464	0.3	N			4		
						5		
D	<168	0.2	N	PH07B	6	6	CCHE	6' CALICHE with sand, medium brown, coarse grained, sub-rounded grains, no stain, no odor, dry.
						TD		Total Depth @ 6' bgs.

				Sample Name: PH08		Date: 1/16/24		
				Site Name: PLU 17 Twin Wells Ranch 702H				
				Incident Number: NAPP2335329764				
				Job Number: 03C1558303				
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: MR		Method: Backhoe		
Coordinates: 32.207720, -103.806258				Hole Diameter: ~2'		Total Depth: 6'		
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	2,464	10.5	Y	PH08	0.5	0	SP-SM	0-2' SAND with silt, medium brown, medium to fine grained. Poorly sorted, no stain past 0.5', no odor, moist.
M	4,430	9.6	N			1		
M	4,430	0.9	N	PH08A	2	2		2-4' SAA, red-brown color.
M	4,049	1.3	N			3		
D	790	0.2	N			4	CCHE	4-6' CALICHE, white to light brown, poorly sorted, coarse, sub-rounded grains, no stain, no odor, dry.
						5		
D	<168	0.1	N	PH08B	6	6		
						TD		Total Depth @ 6' bgs.

		Sample Name: PH09		Date: 1/17/24				
		Site Name: PLU 17 Twin Wells Ranch 702H						
		Incident Number: NAPP2335329764						
		Job Number: 03C1558303						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.207981, -103.806256			Logged By: MR		Method: Backhoe			
			Hole Diameter: ~2'		Total Depth: 1'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	<168	0.9	Y	PH09	0.5	0	SP-SM	0-1' SAND with silt, medium brown, medium to fine grained. Poorly sorted, no stain past 0.5', no odor, moist.
M	<168	0.1	N	PH09A	1	1		
						TD		Total Depth @ 1' bgs.

		Sample Name: PH10		Date: 1/16/24				
		Site Name: PLU 17 Twin Wells Ranch 702H						
		Incident Number: NAPP2335329764						
		Job Number: 03C1558303						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.207665, -103.806145			Logged By: MR		Method: Backhoe			
			Hole Diameter: ~2'		Total Depth: 10'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	4,049	7.5	Y	PH10	0.5	0	SP-SM	0-6' SAND with silt, medium brown, medium to fine grained, poorly sorted, no stain past 0.5', no odor, moist.
M	3,035	5.2	N		1			
M	2,296	0.8	N		2			
M	2,464	0.1	N		3			
M	3,259	0.2	N	PH10A	4	4		
						5	CCHE	6-10' CALICHE, light to medium brown, coarse, sub-rounded grains, no stain, no odor, dry.
D	862	0.1	N			6		
						7		
D	790	0.1	N			8		
						9		
D	<168	0.0		PH10B	10	10		
						TD		Total Depth @ 10' bgs.

		Sample Name: PH11		Date: 1/17/24				
		Site Name: PLU 17 Twin Wells Ranch 702H						
		Incident Number: NAPP2335329764						
		Job Number: 03C1558303						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.207548, -103.806074			Logged By: MR		Method: Backhoe			
			Hole Diameter: ~2'		Total Depth: 4'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	2,464	0.6	Y	PH11	0.5	0	SP-SM	0-4' SAND with silt, medium brown, medium to fine grained. Poorly sorted, no stain past 0.5', no odor, moist.
M	2,145	1.3	N			1		
M	3,035	0.5	N	PH11A	2	2		
M	717	0.6	N			3		
M	<168	0.3	N	PH11B	4	4		
						TD		Total Depth @ 4' bgs.

					Sample Name: PH12		Date: 1/17/24	
					Site Name: PLU 17 Twin Wells Ranch 702H			
					Incident Number: NAPP2335329764			
					Job Number: 03C1558303			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: MR		Method: Backhoe	
Coordinates: 32.207607, -103.805974					Hole Diameter: ~2'		Total Depth: 6'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	3,511	7.5	Y	PH12	0.5	0	SP-SM	0-4' SAND with silt, medium brown, medium to fine grained. Poorly sorted, no stain past 0.5', no odor, moist.
M	2,828	6.2	N		1			
M	3,035	3.4	N		2			
M	2,005	0.2	N		3			
M	3,259	0.1	N	PH12A	4	4	SP-SC	4-6' SAND with clay, red brown, fine to very fine grains Poorly sorted, no stain, no odor, moist.
D	235	0.0	N	PH12B	6	6	CCHE	6' CALICHE, white, coarse and sub-rounded grains, poorly sorted, no stain, no odor, dry.
						TD		Total Depth @ 6' bgs.

		Sample Name: PH13		Date: 1/17/24				
		Site Name: PLU 17 Twin Wells Ranch 702H						
		Incident Number: NAPP2335329764						
		Job Number: 03C1558303						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.207540, -103.805716			Logged By: MR		Method: Backhoe			
			Hole Diameter: ~2'		Total Depth: 1'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	<168	0.2	Y	PH13	0.5	0	SP-SM	0-1' SAND with silt, medium brown, medium to fine grained. Poorly sorted, no stain past 0.5', no odor, moist.
M	<168	0.0	N	PH13A	1	1		
						TD		Total Depth @ 1' bgs.

		Sample Name: PH14		Date: 1/17/24				
		Site Name: PLU 17 Twin Wells Ranch 702H						
		Incident Number: NAPP2335329764						
		Job Number: 03C1558303						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.207616, -103.805699			Logged By: MR		Method: Backhoe			
			Hole Diameter: ~2'		Total Depth: 4'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	1,204	0.8	Y	PH14	0.5	0	SP-SM	0-4' SAND with silt, medium brown, medium to fine grained. Poorly sorted, no stain past 0.5', no odor, moist.
M	1,400	0.7	N					
M	2,145	0.9	N	PH14A	2	2		
M	<168	0.5	N			3		
M	<168	0.1	N	PH14B	4	4	SP-SC	
						TD		4' SAND with clay, red brown, fine to very fine grains, poorly sorted, no stain, no odor, moist. Total Depth @ 4' bgs.

								Sample Name: PH15	Date: 1/17/24
								Site Name: PLU 17 Twin Wells Ranch 702H	
								Incident Number: NAPP2335329764	
								Job Number: 03C1558303	
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR	Method: Backhoe
Coordinates: 32.207598, -103.805397								Hole Diameter: ~2'	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. A 40% correction factor is included in all chloride screenings.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions	
			Y			0	SP-SM	0-8' SAND with silt, medium brown, medium to fine grained, poorly sorted, no stain past 0.5', no odor, moist.	
M	3,259	10.7		PH15	0.5				
M	4,452	8.2	N			1			
M	4,094	1.7	N			2			
M	3,259	0.9	N			3			
M	5,684	0.8	N	PH15A	4	4			
						5			
D	1,742	1.0	N			6			
						7			
D	<168	0.1	N	PH15B	8	8	CCHE	8' CALICHE, white, coarse and sub-rounded grains, no stain, no odor, dry.	
						TD		Total Depth @ 8' bgs.	

 ENSOLUM Environmental, Engineering and Hydrogeologic Consultants		Sample Name: PH16		Date: 1/17/24				
		Site Name: PLU 17 Twin Wells Ranch 702H						
		Incident Number: NAPP2335329764						
		Job Number: 03C1558303						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.207546, -103.805491			Logged By: MR		Method: Hand Auger			
			Hole Diameter: 4"		Total Depth: 6'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	2,464	7.5	Y	PH16	0.5	0	SP-SM	0-4' SAND with silt, medium brown, medium to fine grained. Poorly sorted, no stain past 0.5', no odor, moist.
M	1,870	6.2	N		1			
M	2,464	3.4	N		2			
M	717	0.2	N		3			
M	3,259	0.1	N	PH16A	4	4	SP-SC	4-6' SAND with clay, red brown, fine to very fine grains Poorly sorted, no stain, no odor, moist.
						5		
D	<168	0.0	N	PH16B	6	6	CCHE	6' CALICHE, white, coarse and sub-rounded grains, poorly sorted, no stain, no odor, dry.
						TD		Total Depth @ 6' bgs.

				Sample Name: PH17		Date: 1/17/24		
				Site Name: PLU 17 Twin Wells Ranch 702H				
				Incident Number: NAPP2335329764				
				Job Number: 03C1558303				
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.207459, -103.805532				Logged By: MR		Method: Hand Auger		
				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. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	3,035	4.1	Y	PH17	0.5	0	SP-SM	0-3' SAND with silt, medium brown, medium to fine grained. Poorly sorted, no stain past 0.5', no odor, moist.
M	1,742	0.7	N		1			
M	274	0.6	N		2			
M	<168	0.1	N	PH17A	3	3 TD	Total Depth @ 3' bgs.	



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
 Ensolum
 601 N. Marienfeld St.
 Suite 400
 Midland, Texas 79701
 Generated 1/22/2024 3:44:07 PM

JOB DESCRIPTION

PLU 17 Twin Wells Ranch 702H
 03C1558303

JOB NUMBER

890-5972-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
1/22/2024 3:44:07 PM

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

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Client: Ensolum
Project/Site: PLU 17 Twin Wells Ranch 702H

Laboratory Job ID: 890-5972-1
SDG: 03C1558303

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Definitions/Glossary

Client: Ensolum
Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
SDG: 03C1558303

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1

Job ID: 890-5972-1

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Job Narrative 890-5972-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 1/15/2024 9:05 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 -0.8°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-5972-1), PH01A (890-5972-2), PH01B (890-5972-3), PH02 (890-5972-4), PH02A (890-5972-5), PH02B (890-5972-6), PH03 (890-5972-7), PH03A (890-5972-8), PH03B (890-5972-9), PH04 (890-5972-10), PH04A (890-5972-11), PH04B (890-5972-12), PH05 (890-5972-13), PH05A (890-5972-14), PH05B (890-5972-15), PH06 (890-5972-16), PH06A (890-5972-17) and PH06B (890-5972-18).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-71133 and analytical batch 880-71154 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH01 (890-5972-1), PH01A (890-5972-2), PH05 (890-5972-13) and PH06A (890-5972-17). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-71154 recovered above the upper control limit for <AffectedAnalytes>. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-71154/33).

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-71132 and analytical batch 880-71154 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: The laboratory control sample duplicate (LCSD) for preparation batch 880-71132 and analytical batch 880-71154 recovered outside control limits for the following analytes: m-Xylene & p-Xylene. Since only an acceptable LCS is required per the method, the LCS shows recovery for the batch therefore the data has been qualified and reported.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: PH01 (890-5972-1), PH02 (890-5972-4), PH02A (890-5972-5), PH02B (890-5972-6), PH03 (890-5972-7), PH03B (890-5972-9) and (890-5972-A-1-E MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-71029 and analytical batch 880-71032 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: PH04B (890-5972-12), PH05B (890-5972-15), PH06 (890-5972-16) and PH06B (890-5972-18). Evidence of matrix interference is present; therefore, re-extraction

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Case Narrative

Client: Ensolum
Project: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1

Job ID: 890-5972-1 (Continued)

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and/or re-analysis was not performed.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-71003 and analytical batch 880-71077 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH01

Lab Sample ID: 890-5972-1

Date Collected: 01/12/24 10:35

Matrix: Solid

Date Received: 01/15/24 09:05

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		01/18/24 14:53	01/20/24 00:17	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/18/24 14:53	01/20/24 00:17	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/18/24 14:53	01/20/24 00:17	1
m-Xylene & p-Xylene	<0.00402	U *+ F1	0.00402	mg/Kg		01/18/24 14:53	01/20/24 00:17	1
o-Xylene	<0.00201	U F1	0.00201	mg/Kg		01/18/24 14:53	01/20/24 00:17	1
Xylenes, Total	<0.00402	U *+ F1	0.00402	mg/Kg		01/18/24 14:53	01/20/24 00:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	179	S1+	70 - 130	01/18/24 14:53	01/20/24 00:17	1
1,4-Difluorobenzene (Surr)	127		70 - 130	01/18/24 14:53	01/20/24 00:17	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			01/20/24 00:17	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			01/17/24 10:47	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	<49.7	U F1	49.7	mg/Kg		01/16/24 16:03	01/17/24 10:47	1
Diesel Range Organics (Over C10-C28)	<49.7	U F1 F2	49.7	mg/Kg		01/16/24 16:03	01/17/24 10:47	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		01/16/24 16:03	01/17/24 10:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	66	S1-	70 - 130	01/16/24 16:03	01/17/24 10:47	1
o-Terphenyl	66	S1-	70 - 130	01/16/24 16:03	01/17/24 10:47	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2450		24.9	mg/Kg			01/17/24 20:43	5

Client Sample ID: PH01A

Lab Sample ID: 890-5972-2

Date Collected: 01/12/24 10:55

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 4'

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		01/18/24 14:53	01/20/24 00:38	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/18/24 14:53	01/20/24 00:38	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/18/24 14:53	01/20/24 00:38	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	mg/Kg		01/18/24 14:53	01/20/24 00:38	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/18/24 14:53	01/20/24 00:38	1
Xylenes, Total	<0.00402	U *+	0.00402	mg/Kg		01/18/24 14:53	01/20/24 00:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	232	S1+	70 - 130	01/18/24 14:53	01/20/24 00:38	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH01A

Lab Sample ID: 890-5972-2

Date Collected: 01/12/24 10:55

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	122		70 - 130	01/18/24 14:53	01/20/24 00:38	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			01/20/24 00:38	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			01/17/24 11:55	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	<50.4	U	50.4	mg/Kg		01/16/24 16:03	01/17/24 11:55	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4	mg/Kg		01/16/24 16:03	01/17/24 11:55	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		01/16/24 16:03	01/17/24 11:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130	01/16/24 16:03	01/17/24 11:55	1
o-Terphenyl	75		70 - 130	01/16/24 16:03	01/17/24 11:55	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5630		50.0	mg/Kg			01/17/24 20:59	10

Client Sample ID: PH01B

Lab Sample ID: 890-5972-3

Date Collected: 01/12/24 11:00

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 6'

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		01/18/24 14:53	01/20/24 00:58	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 00:58	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 00:58	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 00:58	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 00:58	1
Xylenes, Total	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 00:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	01/18/24 14:53	01/20/24 00:58	1
1,4-Difluorobenzene (Surr)	112		70 - 130	01/18/24 14:53	01/20/24 00:58	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			01/20/24 00:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			01/17/24 12:18	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH01B

Lab Sample ID: 890-5972-3

Date Collected: 01/12/24 11:00

Matrix: Solid

Date Received: 01/15/24 09:05

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	<50.5	U	50.5	mg/Kg		01/16/24 16:03	01/17/24 12:18	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		01/16/24 16:03	01/17/24 12:18	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		01/16/24 16:03	01/17/24 12:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	77		70 - 130	01/16/24 16:03	01/17/24 12:18	1
o-Terphenyl	77		70 - 130	01/16/24 16:03	01/17/24 12:18	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	180		4.95	mg/Kg			01/17/24 21:04	1

Client Sample ID: PH02

Lab Sample ID: 890-5972-4

Date Collected: 01/12/24 12:50

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 01:18	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 01:18	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 01:18	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 01:18	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 01:18	1
Xylenes, Total	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 01:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	01/18/24 14:53	01/20/24 01:18	1
1,4-Difluorobenzene (Surr)	109		70 - 130	01/18/24 14:53	01/20/24 01:18	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			01/20/24 01:18	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			01/17/24 12:39	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	<49.6	U	49.6	mg/Kg		01/16/24 16:03	01/17/24 12:39	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/16/24 16:03	01/17/24 12:39	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/16/24 16:03	01/17/24 12:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	65	S1-	70 - 130	01/16/24 16:03	01/17/24 12:39	1
o-Terphenyl	64	S1-	70 - 130	01/16/24 16:03	01/17/24 12:39	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH02

Lab Sample ID: 890-5972-4

Date Collected: 01/12/24 12:50
 Date Received: 01/15/24 09:05
 Sample Depth: 0.5'

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2150		25.0	mg/Kg			01/17/24 21:09	5

Client Sample ID: PH02A

Lab Sample ID: 890-5972-5

Date Collected: 01/12/24 13:05
 Date Received: 01/15/24 09:05
 Sample Depth: 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		01/18/24 14:53	01/20/24 01:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 01:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 01:39	1
m-Xylene & p-Xylene	<0.00399	U **	0.00399	mg/Kg		01/18/24 14:53	01/20/24 01:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 01:39	1
Xylenes, Total	<0.00399	U **	0.00399	mg/Kg		01/18/24 14:53	01/20/24 01:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130			01/18/24 14:53	01/20/24 01:39	1
1,4-Difluorobenzene (Surr)	115		70 - 130			01/18/24 14:53	01/20/24 01:39	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			01/20/24 01:39	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			01/17/24 13:00	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		01/16/24 16:03	01/17/24 13:00	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/16/24 16:03	01/17/24 13:00	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/16/24 16:03	01/17/24 13:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	65	S1-	70 - 130			01/16/24 16:03	01/17/24 13:00	1
o-Terphenyl	64	S1-	70 - 130			01/16/24 16:03	01/17/24 13:00	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4420		50.4	mg/Kg			01/17/24 21:14	10

Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH02B

Lab Sample ID: 890-5972-6

Date Collected: 01/12/24 13:30

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 8'

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		01/18/24 14:53	01/20/24 01:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 01:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 01:59	1
m-Xylene & p-Xylene	<0.00401	U **	0.00401	mg/Kg		01/18/24 14:53	01/20/24 01:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 01:59	1
Xylenes, Total	<0.00401	U **	0.00401	mg/Kg		01/18/24 14:53	01/20/24 01:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	01/18/24 14:53	01/20/24 01:59	1
1,4-Difluorobenzene (Surr)	107		70 - 130	01/18/24 14:53	01/20/24 01:59	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			01/20/24 01:59	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			01/17/24 13:22	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	<49.6	U	49.6	mg/Kg		01/16/24 16:03	01/17/24 13:22	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/16/24 16:03	01/17/24 13:22	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/16/24 16:03	01/17/24 13:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	64	S1-	70 - 130	01/16/24 16:03	01/17/24 13:22	1
o-Terphenyl	64	S1-	70 - 130	01/16/24 16:03	01/17/24 13:22	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	334		4.97	mg/Kg			01/17/24 21:30	1

Client Sample ID: PH03

Lab Sample ID: 890-5972-7

Date Collected: 01/12/24 13:40

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 02:20	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 02:20	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 02:20	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 02:20	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 02:20	1
Xylenes, Total	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 02:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130	01/18/24 14:53	01/20/24 02:20	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH03

Lab Sample ID: 890-5972-7

Date Collected: 01/12/24 13:40

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	126		70 - 130	01/18/24 14:53	01/20/24 02:20	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			01/20/24 02:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			01/17/24 13:43	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	<50.3	U	50.3	mg/Kg		01/16/24 16:03	01/17/24 13:43	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3	mg/Kg		01/16/24 16:03	01/17/24 13:43	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		01/16/24 16:03	01/17/24 13:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	63	S1-	70 - 130	01/16/24 16:03	01/17/24 13:43	1
o-Terphenyl	63	S1-	70 - 130	01/16/24 16:03	01/17/24 13:43	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2570		24.8	mg/Kg			01/17/24 21:35	5

Client Sample ID: PH03A

Lab Sample ID: 890-5972-8

Date Collected: 01/12/24 13:45

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 1'

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		01/18/24 14:53	01/20/24 02:40	1
Toluene	<0.00198	U	0.00198	mg/Kg		01/18/24 14:53	01/20/24 02:40	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		01/18/24 14:53	01/20/24 02:40	1
m-Xylene & p-Xylene	<0.00396	U**	0.00396	mg/Kg		01/18/24 14:53	01/20/24 02:40	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		01/18/24 14:53	01/20/24 02:40	1
Xylenes, Total	<0.00396	U**	0.00396	mg/Kg		01/18/24 14:53	01/20/24 02:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	01/18/24 14:53	01/20/24 02:40	1
1,4-Difluorobenzene (Surr)	113		70 - 130	01/18/24 14:53	01/20/24 02:40	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			01/20/24 02:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			01/17/24 14:05	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH03A

Lab Sample ID: 890-5972-8

Date Collected: 01/12/24 13:45

Matrix: Solid

Date Received: 01/15/24 09:05

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	<50.3	U	50.3	mg/Kg		01/16/24 16:03	01/17/24 14:05	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3	mg/Kg		01/16/24 16:03	01/17/24 14:05	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		01/16/24 16:03	01/17/24 14:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130	01/16/24 16:03	01/17/24 14:05	1
o-Terphenyl	74		70 - 130	01/16/24 16:03	01/17/24 14:05	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2560		24.9	mg/Kg			01/17/24 21:40	5

Client Sample ID: PH03B

Lab Sample ID: 890-5972-9

Date Collected: 01/12/24 14:10

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 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		01/18/24 14:53	01/20/24 03:01	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 03:01	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 03:01	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 03:01	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 03:01	1
Xylenes, Total	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 03:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130	01/18/24 14:53	01/20/24 03:01	1
1,4-Difluorobenzene (Surr)	113		70 - 130	01/18/24 14:53	01/20/24 03:01	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			01/20/24 03:01	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			01/17/24 14:26	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	<49.7	U	49.7	mg/Kg		01/16/24 16:03	01/17/24 14:26	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		01/16/24 16:03	01/17/24 14:26	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		01/16/24 16:03	01/17/24 14:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	58	S1-	70 - 130	01/16/24 16:03	01/17/24 14:26	1
o-Terphenyl	59	S1-	70 - 130	01/16/24 16:03	01/17/24 14:26	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH03B

Lab Sample ID: 890-5972-9

Date Collected: 01/12/24 14:10

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 8'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.2		5.05	mg/Kg			01/17/24 21:45	1

Client Sample ID: PH04

Lab Sample ID: 890-5972-10

Date Collected: 01/12/24 14:25

Matrix: Solid

Date Received: 01/15/24 09:05

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		01/18/24 14:53	01/20/24 03:21	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 03:21	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 03:21	1
m-Xylene & p-Xylene	<0.00399	U **	0.00399	mg/Kg		01/18/24 14:53	01/20/24 03:21	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 03:21	1
Xylenes, Total	<0.00399	U **	0.00399	mg/Kg		01/18/24 14:53	01/20/24 03:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			01/18/24 14:53	01/20/24 03:21	1
1,4-Difluorobenzene (Surr)	107		70 - 130			01/18/24 14:53	01/20/24 03:21	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			01/20/24 03:21	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			01/17/24 15:34	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	<50.2	U	50.2	mg/Kg		01/16/24 16:03	01/17/24 15:34	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2	mg/Kg		01/16/24 16:03	01/17/24 15:34	1
Oll Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		01/16/24 16:03	01/17/24 15:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	73		70 - 130			01/16/24 16:03	01/17/24 15:34	1
o-Terphenyl	73		70 - 130			01/16/24 16:03	01/17/24 15:34	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1940		25.1	mg/Kg			01/17/24 21:50	5

Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH04A

Lab Sample ID: 890-5972-11

Date Collected: 01/12/24 14:35

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/18/24 14:53	01/20/24 05:11	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/18/24 14:53	01/20/24 05:11	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/18/24 14:53	01/20/24 05:11	1
m-Xylene & p-Xylene	<0.00402	U **	0.00402	mg/Kg		01/18/24 14:53	01/20/24 05:11	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/18/24 14:53	01/20/24 05:11	1
Xylenes, Total	<0.00402	U **	0.00402	mg/Kg		01/18/24 14:53	01/20/24 05:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	01/18/24 14:53	01/20/24 05:11	1
1,4-Difluorobenzene (Surr)	105		70 - 130	01/18/24 14:53	01/20/24 05:11	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			01/20/24 05:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			01/17/24 15:55	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	<50.4	U	50.4	mg/Kg		01/16/24 16:03	01/17/24 15:55	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4	mg/Kg		01/16/24 16:03	01/17/24 15:55	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		01/16/24 16:03	01/17/24 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130	01/16/24 16:03	01/17/24 15:55	1
o-Terphenyl	75		70 - 130	01/16/24 16:03	01/17/24 15:55	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2220	F1	25.1	mg/Kg			01/17/24 21:55	5

Client Sample ID: PH04B

Lab Sample ID: 890-5972-12

Date Collected: 01/12/24 14:55

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 8'

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		01/18/24 14:53	01/20/24 05:32	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/18/24 14:53	01/20/24 05:32	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/18/24 14:53	01/20/24 05:32	1
m-Xylene & p-Xylene	<0.00404	U **	0.00404	mg/Kg		01/18/24 14:53	01/20/24 05:32	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/18/24 14:53	01/20/24 05:32	1
Xylenes, Total	<0.00404	U **	0.00404	mg/Kg		01/18/24 14:53	01/20/24 05:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	01/18/24 14:53	01/20/24 05:32	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH04B

Lab Sample ID: 890-5972-12

Date Collected: 01/12/24 14:55

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 8'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	111		70 - 130	01/18/24 14:53	01/20/24 05:32	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			01/20/24 05:32	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			01/17/24 16:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		01/16/24 16:03	01/17/24 16:17	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		01/16/24 16:03	01/17/24 16:17	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		01/16/24 16:03	01/17/24 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	60	S1-	70 - 130	01/16/24 16:03	01/17/24 16:17	1
o-Terphenyl	61	S1-	70 - 130	01/16/24 16:03	01/17/24 16:17	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	90.3		4.99	mg/Kg			01/17/24 22:11	1

Client Sample ID: PH05

Lab Sample ID: 890-5972-13

Date Collected: 01/12/24 15:00

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 05:52	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 05:52	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 05:52	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 05:52	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 05:52	1
Xylenes, Total	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 05:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130	01/18/24 14:53	01/20/24 05:52	1
1,4-Difluorobenzene (Surr)	133	S1+	70 - 130	01/18/24 14:53	01/20/24 05:52	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			01/20/24 05:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	70.8		49.6	mg/Kg			01/17/24 16:38	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH05

Lab Sample ID: 890-5972-13

Date Collected: 01/12/24 15:00

Matrix: Solid

Date Received: 01/15/24 09:05

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	70.8		49.6	mg/Kg		01/16/24 16:03	01/17/24 16:38	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/16/24 16:03	01/17/24 16:38	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/16/24 16:03	01/17/24 16:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130			01/16/24 16:03	01/17/24 16:38	1
o-Terphenyl	74		70 - 130			01/16/24 16:03	01/17/24 16:38	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2290		24.9	mg/Kg			01/17/24 22:16	5

Client Sample ID: PH05A

Lab Sample ID: 890-5972-14

Date Collected: 01/12/24 15:05

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 1'

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		01/18/24 14:53	01/20/24 06:13	1
Toluene	<0.00198	U	0.00198	mg/Kg		01/18/24 14:53	01/20/24 06:13	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		01/18/24 14:53	01/20/24 06:13	1
m-Xylene & p-Xylene	<0.00396	U **	0.00396	mg/Kg		01/18/24 14:53	01/20/24 06:13	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		01/18/24 14:53	01/20/24 06:13	1
Xylenes, Total	<0.00396	U **	0.00396	mg/Kg		01/18/24 14:53	01/20/24 06:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			01/18/24 14:53	01/20/24 06:13	1
1,4-Difluorobenzene (Surr)	111		70 - 130			01/18/24 14:53	01/20/24 06:13	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			01/20/24 06:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			01/17/24 17:00	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	<50.4	U	50.4	mg/Kg		01/16/24 16:03	01/17/24 17:00	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4	mg/Kg		01/16/24 16:03	01/17/24 17:00	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		01/16/24 16:03	01/17/24 17:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130			01/16/24 16:03	01/17/24 17:00	1
o-Terphenyl	72		70 - 130			01/16/24 16:03	01/17/24 17:00	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH05A

Lab Sample ID: 890-5972-14

Date Collected: 01/12/24 15:05

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 1'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6910		49.5	mg/Kg			01/17/24 22:31	10

Client Sample ID: PH05B

Lab Sample ID: 890-5972-15

Date Collected: 01/12/24 15:30

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 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		01/18/24 14:53	01/20/24 06:33	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 06:33	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 06:33	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 06:33	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 06:33	1
Xylenes, Total	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 06:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			01/18/24 14:53	01/20/24 06:33	1
1,4-Difluorobenzene (Surr)	114		70 - 130			01/18/24 14:53	01/20/24 06:33	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			01/20/24 06:33	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			01/17/24 17:21	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	<50.5	U	50.5	mg/Kg		01/16/24 16:03	01/17/24 17:21	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		01/16/24 16:03	01/17/24 17:21	1
Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		01/16/24 16:03	01/17/24 17:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	65	S1-	70 - 130			01/16/24 16:03	01/17/24 17:21	1
o-Terphenyl	64	S1-	70 - 130			01/16/24 16:03	01/17/24 17:21	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	483		4.97	mg/Kg			01/17/24 22:36	1

Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH06

Lab Sample ID: 890-5972-16

Date Collected: 01/12/24 15:40

Matrix: Solid

Date Received: 01/15/24 09:05

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		01/18/24 14:53	01/20/24 06:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 06:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 06:53	1
m-Xylene & p-Xylene	<0.00399	U **	0.00399	mg/Kg		01/18/24 14:53	01/20/24 06:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 06:53	1
Xylenes, Total	<0.00399	U **	0.00399	mg/Kg		01/18/24 14:53	01/20/24 06:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	01/18/24 14:53	01/20/24 06:53	1
1,4-Difluorobenzene (Surr)	115		70 - 130	01/18/24 14:53	01/20/24 06:53	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			01/20/24 06:53	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			01/17/24 17:42	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		01/16/24 16:03	01/17/24 17:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/16/24 16:03	01/17/24 17:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/16/24 16:03	01/17/24 17:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	65	S1-	70 - 130	01/16/24 16:03	01/17/24 17:42	1
o-Terphenyl	66	S1-	70 - 130	01/16/24 16:03	01/17/24 17:42	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1970		25.0	mg/Kg			01/17/24 22:41	5

Client Sample ID: PH06A

Lab Sample ID: 890-5972-17

Date Collected: 01/12/24 16:00

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 4'

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		01/18/24 14:53	01/20/24 07:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/20/24 07:14	1
Ethylbenzene	0.00208		0.00200	mg/Kg		01/18/24 14:53	01/20/24 07:14	1
m-Xylene & p-Xylene	<0.00401	U **	0.00401	mg/Kg		01/18/24 14:53	01/20/24 07:14	1
o-Xylene	0.00218		0.00200	mg/Kg		01/18/24 14:53	01/20/24 07:14	1
Xylenes, Total	<0.00401	U **	0.00401	mg/Kg		01/18/24 14:53	01/20/24 07:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	366	S1+	70 - 130	01/18/24 14:53	01/20/24 07:14	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH06A

Lab Sample ID: 890-5972-17

Date Collected: 01/12/24 16:00

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	112		70 - 130	01/18/24 14:53	01/20/24 07:14	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00426		0.00401	mg/Kg			01/20/24 07:14	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			01/17/24 18:04	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	<49.9	U	49.9	mg/Kg		01/16/24 16:03	01/17/24 18:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/16/24 16:03	01/17/24 18:04	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/16/24 16:03	01/17/24 18:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130	01/16/24 16:03	01/17/24 18:04	1
o-Terphenyl	88		70 - 130	01/16/24 16:03	01/17/24 18:04	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3560		25.0	mg/Kg			01/17/24 22:47	5

Client Sample ID: PH06B

Lab Sample ID: 890-5972-18

Date Collected: 01/12/24 16:05

Matrix: Solid

Date Received: 01/15/24 09:05

Sample Depth: 6'

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		01/18/24 14:53	01/20/24 07:34	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 07:34	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 07:34	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 07:34	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/18/24 14:53	01/20/24 07:34	1
Xylenes, Total	<0.00398	U **	0.00398	mg/Kg		01/18/24 14:53	01/20/24 07:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	01/18/24 14:53	01/20/24 07:34	1
1,4-Difluorobenzene (Surr)	111		70 - 130	01/18/24 14:53	01/20/24 07:34	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			01/20/24 07:34	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			01/17/24 18:25	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH06B

Lab Sample ID: 890-5972-18

Date Collected: 01/12/24 16:05

Matrix: Solid

Date Received: 01/15/24 09:05

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		01/16/24 16:03	01/17/24 18:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/16/24 16:03	01/17/24 18:25	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/16/24 16:03	01/17/24 18:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	62	S1-	70 - 130	01/16/24 16:03	01/17/24 18:25	1
o-Terphenyl	62	S1-	70 - 130	01/16/24 16:03	01/17/24 18:25	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	174		4.99	mg/Kg			01/17/24 22:52	1

Surrogate Summary

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-5972-1	PH01	179 S1+	127
890-5972-1 MS	PH01	109	121
890-5972-1 MSD	PH01	114	101
890-5972-2	PH01A	232 S1+	122
890-5972-3	PH01B	103	112
890-5972-4	PH02	109	109
890-5972-5	PH02A	115	115
890-5972-6	PH02B	114	107
890-5972-7	PH03	126	126
890-5972-8	PH03A	107	113
890-5972-9	PH03B	119	113
890-5972-10	PH04	116	107
890-5972-11	PH04A	93	105
890-5972-12	PH04B	112	111
890-5972-13	PH05	125	133 S1+
890-5972-14	PH05A	108	111
890-5972-15	PH05B	101	114
890-5972-16	PH06	107	115
890-5972-17	PH06A	366 S1+	112
890-5972-18	PH06B	113	111
LCS 880-71132/1-A	Lab Control Sample	103	103
LCSD 880-71132/2-A	Lab Control Sample Dup	113	103
MB 880-71132/5-A	Method Blank	118	121
MB 880-71133/5-A	Method Blank	138 S1+	133 S1+

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-5972-1	PH01	66 S1-	66 S1-
890-5972-1 MS	PH01	63 S1-	60 S1-
890-5972-1 MSD	PH01	76	73
890-5972-2	PH01A	74	75
890-5972-3	PH01B	77	77
890-5972-4	PH02	65 S1-	64 S1-
890-5972-5	PH02A	65 S1-	64 S1-
890-5972-6	PH02B	64 S1-	64 S1-
890-5972-7	PH03	63 S1-	63 S1-
890-5972-8	PH03A	75	74
890-5972-9	PH03B	58 S1-	59 S1-
890-5972-10	PH04	73	73
890-5972-11	PH04A	75	75
890-5972-12	PH04B	60 S1-	61 S1-
890-5972-13	PH05	74	74

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Surrogate Summary

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-5972-14	PH05A	74	72
890-5972-15	PH05B	65 S1-	64 S1-
890-5972-16	PH06	65 S1-	66 S1-
890-5972-17	PH06A	87	88
890-5972-18	PH06B	62 S1-	62 S1-
LCS 880-71029/2-A	Lab Control Sample	90	104
LCSD 880-71029/3-A	Lab Control Sample Dup	84	98
MB 880-71029/1-A - RA2	Method Blank	85	91

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-71132/5-A
 Matrix: Solid
 Analysis Batch: 71154

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 71132

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/19/24 23:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/19/24 23:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/19/24 23:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/18/24 14:53	01/19/24 23:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:53	01/19/24 23:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/18/24 14:53	01/19/24 23:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130	01/18/24 14:53	01/19/24 23:48	1
1,4-Difluorobenzene (Surr)	121		70 - 130	01/18/24 14:53	01/19/24 23:48	1

Lab Sample ID: LCS 880-71132/1-A
 Matrix: Solid
 Analysis Batch: 71154

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 71132

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1244		mg/Kg		124	70 - 130
Toluene	0.100	0.1072		mg/Kg		107	70 - 130
Ethylbenzene	0.100	0.1125		mg/Kg		113	70 - 130
m-Xylene & p-Xylene	0.200	0.2409		mg/Kg		120	70 - 130
o-Xylene	0.100	0.1172		mg/Kg		117	70 - 130

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

Lab Sample ID: LCSD 880-71132/2-A
 Matrix: Solid
 Analysis Batch: 71154

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 71132

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.1267		mg/Kg		127	70 - 130	2	35
Toluene	0.100	0.1122		mg/Kg		112	70 - 130	5	35
Ethylbenzene	0.100	0.1228		mg/Kg		123	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.2716	*+	mg/Kg		136	70 - 130	12	35
o-Xylene	0.100	0.1277		mg/Kg		128	70 - 130	9	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 890-5972-1 MS
 Matrix: Solid
 Analysis Batch: 71154

Client Sample ID: PH01
 Prep Type: Total/NA
 Prep Batch: 71132

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.100	0.1265		mg/Kg		126	70 - 130
Toluene	<0.00201	U	0.100	0.08455		mg/Kg		84	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
SDG: 03C1558303

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

Lab Sample ID: 890-5972-1 MS

Matrix: Solid

Analysis Batch: 71154

Client Sample ID: PH01

Prep Type: Total/NA

Prep Batch: 71132

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.100	0.09492		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	<0.00402	U *+ F1	0.200	0.2367		mg/Kg		118	70 - 130
o-Xylene	<0.00201	U F1	0.100	0.1198		mg/Kg		120	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	121		70 - 130

Lab Sample ID: 890-5972-1 MSD

Matrix: Solid

Analysis Batch: 71154

Client Sample ID: PH01

Prep Type: Total/NA

Prep Batch: 71132

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0996	0.1210		mg/Kg		121	70 - 130	4	35
Toluene	<0.00201	U	0.0996	0.1060		mg/Kg		106	70 - 130	23	35
Ethylbenzene	<0.00201	U	0.0996	0.1118		mg/Kg		112	70 - 130	16	35
m-Xylene & p-Xylene	<0.00402	U *+ F1	0.199	0.2654	F1	mg/Kg		133	70 - 130	11	35
o-Xylene	<0.00201	U F1	0.0996	0.1340	F1	mg/Kg		135	70 - 130	11	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: MB 880-71133/5-A

Matrix: Solid

Analysis Batch: 71154

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 71133

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:55	01/19/24 12:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:55	01/19/24 12:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:55	01/19/24 12:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/18/24 14:55	01/19/24 12:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/18/24 14:55	01/19/24 12:11	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/18/24 14:55	01/19/24 12:11	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130	01/18/24 14:55	01/19/24 12:11	1
1,4-Difluorobenzene (Surr)	133	S1+	70 - 130	01/18/24 14:55	01/19/24 12:11	1

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

Lab Sample ID: LCS 880-71029/2-A

Matrix: Solid

Analysis Batch: 71032

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 71029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	823.0		mg/Kg		82	70 - 130

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QC Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

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

Lab Sample ID: LCS 880-71029/2-A
Matrix: Solid
Analysis Batch: 71032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (Over C10-C28)	1000	852.7		mg/Kg		85	70 - 130
Surrogate		LCS %Recovery	LCS Qualifier				Limits
1-Chlorooctane		90					70 - 130
o-Terphenyl		104					70 - 130

Lab Sample ID: LCSD 880-71029/3-A
Matrix: Solid
Analysis Batch: 71032

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 71029

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	858.5		mg/Kg		86	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	1000	807.3		mg/Kg		81	70 - 130	5	20
Surrogate		LCSD %Recovery	LCSD Qualifier				Limits		
1-Chlorooctane		84					70 - 130		
o-Terphenyl		98					70 - 130		

Lab Sample ID: 890-5972-1 MS
Matrix: Solid
Analysis Batch: 71032

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 71029

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.7	U F1	1000	667.6	F1	mg/Kg		62	70 - 130
Diesel Range Organics (Over C10-C28)	<49.7	U F1 F2	1000	635.5	F1	mg/Kg		63	70 - 130
Surrogate		MS %Recovery		MS Qualifier					Limits
1-Chlorooctane		63	S1-						70 - 130
o-Terphenyl		60	S1-						70 - 130

Lab Sample ID: 890-5972-1 MSD
Matrix: Solid
Analysis Batch: 71032

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 71029

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	<49.7	U F1	1000	785.7		mg/Kg		74	70 - 130	16	20
Diesel Range Organics (Over C10-C28)	<49.7	U F1 F2	1000	796.8	F2	mg/Kg		80	70 - 130	23	20
Surrogate		MSD %Recovery		MSD Qualifier					Limits		
1-Chlorooctane		76							70 - 130		
o-Terphenyl		73							70 - 130		

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QC Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Method: 8015B NM - Diesel Range Organics (DRO) (GC) - RA2

Lab Sample ID: MB 880-71029/1-A
 Matrix: Solid
 Analysis Batch: 71032

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 71029

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10 - RA2	<50.0	U	50.0	mg/Kg		01/16/24 16:03	01/17/24 08:01	1
Diesel Range Organics (Over C10-C28) - RA2	<50.0	U	50.0	mg/Kg		01/16/24 16:03	01/17/24 08:01	1
Oil Range Organics (Over C28-C36) - RA2	<50.0	U	50.0	mg/Kg		01/16/24 16:03	01/17/24 08:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane - RA2	85		70 - 130	01/16/24 16:03	01/17/24 08:01	1
o-Terphenyl - RA2	91		70 - 130	01/16/24 16:03	01/17/24 08:01	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71003/1-A
 Matrix: Solid
 Analysis Batch: 71077

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			01/17/24 20:28	1

Lab Sample ID: LCS 880-71003/2-A
 Matrix: Solid
 Analysis Batch: 71077

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	243.5		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-71003/3-A
 Matrix: Solid
 Analysis Batch: 71077

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	250.4		mg/Kg		100	90 - 110	3	20

Lab Sample ID: 890-5972-1 MS
 Matrix: Solid
 Analysis Batch: 71077

Client Sample ID: PH01
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2450		1250	3744		mg/Kg		104	90 - 110

Lab Sample ID: 890-5972-1 MSD
 Matrix: Solid
 Analysis Batch: 71077

Client Sample ID: PH01
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2450		1250	3746		mg/Kg		104	90 - 110	0	20

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QC Sample Results

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-5972-11 MS
 Matrix: Solid
 Analysis Batch: 71077

Client Sample ID: PH04A
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2220	F1	1250	3777	F1	mg/Kg		124	90 - 110

Lab Sample ID: 890-5972-11 MSD
 Matrix: Solid
 Analysis Batch: 71077

Client Sample ID: PH04A
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2220	F1	1250	3786	F1	mg/Kg		125	90 - 110	0	20

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QC Association Summary

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

GC VOA

Prep Batch: 71132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5972-1	PH01	Total/NA	Solid	5035	
890-5972-2	PH01A	Total/NA	Solid	5035	
890-5972-3	PH01B	Total/NA	Solid	5035	
890-5972-4	PH02	Total/NA	Solid	5035	
890-5972-5	PH02A	Total/NA	Solid	5035	
890-5972-6	PH02B	Total/NA	Solid	5035	
890-5972-7	PH03	Total/NA	Solid	5035	
890-5972-8	PH03A	Total/NA	Solid	5035	
890-5972-9	PH03B	Total/NA	Solid	5035	
890-5972-10	PH04	Total/NA	Solid	5035	
890-5972-11	PH04A	Total/NA	Solid	5035	
890-5972-12	PH04B	Total/NA	Solid	5035	
890-5972-13	PH05	Total/NA	Solid	5035	
890-5972-14	PH05A	Total/NA	Solid	5035	
890-5972-15	PH05B	Total/NA	Solid	5035	
890-5972-16	PH06	Total/NA	Solid	5035	
890-5972-17	PH06A	Total/NA	Solid	5035	
890-5972-18	PH06B	Total/NA	Solid	5035	
MB 880-71132/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-71132/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 880-71132/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5972-1 MS	PH01	Total/NA	Solid	5035	
890-5972-1 MSD	PH01	Total/NA	Solid	5035	

Prep Batch: 71133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-71133/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 71154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5972-1	PH01	Total/NA	Solid	8021B	71132
890-5972-2	PH01A	Total/NA	Solid	8021B	71132
890-5972-3	PH01B	Total/NA	Solid	8021B	71132
890-5972-4	PH02	Total/NA	Solid	8021B	71132
890-5972-5	PH02A	Total/NA	Solid	8021B	71132
890-5972-6	PH02B	Total/NA	Solid	8021B	71132
890-5972-7	PH03	Total/NA	Solid	8021B	71132
890-5972-8	PH03A	Total/NA	Solid	8021B	71132
890-5972-9	PH03B	Total/NA	Solid	8021B	71132
890-5972-10	PH04	Total/NA	Solid	8021B	71132
890-5972-11	PH04A	Total/NA	Solid	8021B	71132
890-5972-12	PH04B	Total/NA	Solid	8021B	71132
890-5972-13	PH05	Total/NA	Solid	8021B	71132
890-5972-14	PH05A	Total/NA	Solid	8021B	71132
890-5972-15	PH05B	Total/NA	Solid	8021B	71132
890-5972-16	PH06	Total/NA	Solid	8021B	71132
890-5972-17	PH06A	Total/NA	Solid	8021B	71132
890-5972-18	PH06B	Total/NA	Solid	8021B	71132
MB 880-71132/5-A	Method Blank	Total/NA	Solid	8021B	71132
MB 880-71133/5-A	Method Blank	Total/NA	Solid	8021B	71133
LCS 880-71132/1-A	Lab Control Sample	Total/NA	Solid	8021B	71132

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QC Association Summary

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

GC VOA (Continued)

Analysis Batch: 71154 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-71132/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71132
890-5972-1 MS	PH01	Total/NA	Solid	8021B	71132
890-5972-1 MSD	PH01	Total/NA	Solid	8021B	71132

Analysis Batch: 71369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5972-1	PH01	Total/NA	Solid	Total BTEX	
890-5972-2	PH01A	Total/NA	Solid	Total BTEX	
890-5972-3	PH01B	Total/NA	Solid	Total BTEX	
890-5972-4	PH02	Total/NA	Solid	Total BTEX	
890-5972-5	PH02A	Total/NA	Solid	Total BTEX	
890-5972-6	PH02B	Total/NA	Solid	Total BTEX	
890-5972-7	PH03	Total/NA	Solid	Total BTEX	
890-5972-8	PH03A	Total/NA	Solid	Total BTEX	
890-5972-9	PH03B	Total/NA	Solid	Total BTEX	
890-5972-10	PH04	Total/NA	Solid	Total BTEX	
890-5972-11	PH04A	Total/NA	Solid	Total BTEX	
890-5972-12	PH04B	Total/NA	Solid	Total BTEX	
890-5972-13	PH05	Total/NA	Solid	Total BTEX	
890-5972-14	PH05A	Total/NA	Solid	Total BTEX	
890-5972-15	PH05B	Total/NA	Solid	Total BTEX	
890-5972-16	PH06	Total/NA	Solid	Total BTEX	
890-5972-17	PH06A	Total/NA	Solid	Total BTEX	
890-5972-18	PH06B	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 71029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5972-1	PH01	Total/NA	Solid	8015NM Prep	
890-5972-2	PH01A	Total/NA	Solid	8015NM Prep	
890-5972-3	PH01B	Total/NA	Solid	8015NM Prep	
890-5972-4	PH02	Total/NA	Solid	8015NM Prep	
890-5972-5	PH02A	Total/NA	Solid	8015NM Prep	
890-5972-6	PH02B	Total/NA	Solid	8015NM Prep	
890-5972-7	PH03	Total/NA	Solid	8015NM Prep	
890-5972-8	PH03A	Total/NA	Solid	8015NM Prep	
890-5972-9	PH03B	Total/NA	Solid	8015NM Prep	
890-5972-10	PH04	Total/NA	Solid	8015NM Prep	
890-5972-11	PH04A	Total/NA	Solid	8015NM Prep	
890-5972-12	PH04B	Total/NA	Solid	8015NM Prep	
890-5972-13	PH05	Total/NA	Solid	8015NM Prep	
890-5972-14	PH05A	Total/NA	Solid	8015NM Prep	
890-5972-15	PH05B	Total/NA	Solid	8015NM Prep	
890-5972-16	PH06	Total/NA	Solid	8015NM Prep	
890-5972-17	PH06A	Total/NA	Solid	8015NM Prep	
890-5972-18	PH06B	Total/NA	Solid	8015NM Prep	
MB 880-71029/1-A - RA2	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-71029/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-71029/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5972-1 MS	PH01	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

GC Semi VOA (Continued)

Prep Batch: 71029 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5972-1 MSD	PH01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 71032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5972-1	PH01	Total/NA	Solid	8015B NM	71029
890-5972-2	PH01A	Total/NA	Solid	8015B NM	71029
890-5972-3	PH01B	Total/NA	Solid	8015B NM	71029
890-5972-4	PH02	Total/NA	Solid	8015B NM	71029
890-5972-5	PH02A	Total/NA	Solid	8015B NM	71029
890-5972-6	PH02B	Total/NA	Solid	8015B NM	71029
890-5972-7	PH03	Total/NA	Solid	8015B NM	71029
890-5972-8	PH03A	Total/NA	Solid	8015B NM	71029
890-5972-9	PH03B	Total/NA	Solid	8015B NM	71029
890-5972-10	PH04	Total/NA	Solid	8015B NM	71029
890-5972-11	PH04A	Total/NA	Solid	8015B NM	71029
890-5972-12	PH04B	Total/NA	Solid	8015B NM	71029
890-5972-13	PH05	Total/NA	Solid	8015B NM	71029
890-5972-14	PH05A	Total/NA	Solid	8015B NM	71029
890-5972-15	PH05B	Total/NA	Solid	8015B NM	71029
890-5972-16	PH06	Total/NA	Solid	8015B NM	71029
890-5972-17	PH06A	Total/NA	Solid	8015B NM	71029
890-5972-18	PH06B	Total/NA	Solid	8015B NM	71029
MB 880-71029/1-A - RA2	Method Blank	Total/NA	Solid	8015B NM	71029
LCS 880-71029/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	71029
LCSD 880-71029/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	71029
890-5972-1 MS	PH01	Total/NA	Solid	8015B NM	71029
890-5972-1 MSD	PH01	Total/NA	Solid	8015B NM	71029

Analysis Batch: 71081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5972-1	PH01	Total/NA	Solid	8015 NM	
890-5972-2	PH01A	Total/NA	Solid	8015 NM	
890-5972-3	PH01B	Total/NA	Solid	8015 NM	
890-5972-4	PH02	Total/NA	Solid	8015 NM	
890-5972-5	PH02A	Total/NA	Solid	8015 NM	
890-5972-6	PH02B	Total/NA	Solid	8015 NM	
890-5972-7	PH03	Total/NA	Solid	8015 NM	
890-5972-8	PH03A	Total/NA	Solid	8015 NM	
890-5972-9	PH03B	Total/NA	Solid	8015 NM	
890-5972-10	PH04	Total/NA	Solid	8015 NM	
890-5972-11	PH04A	Total/NA	Solid	8015 NM	
890-5972-12	PH04B	Total/NA	Solid	8015 NM	
890-5972-13	PH05	Total/NA	Solid	8015 NM	
890-5972-14	PH05A	Total/NA	Solid	8015 NM	
890-5972-15	PH05B	Total/NA	Solid	8015 NM	
890-5972-16	PH06	Total/NA	Solid	8015 NM	
890-5972-17	PH06A	Total/NA	Solid	8015 NM	
890-5972-18	PH06B	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

HPLC/IC

Leach Batch: 71003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5972-1	PH01	Soluble	Solid	DI Leach	
890-5972-2	PH01A	Soluble	Solid	DI Leach	
890-5972-3	PH01B	Soluble	Solid	DI Leach	
890-5972-4	PH02	Soluble	Solid	DI Leach	
890-5972-5	PH02A	Soluble	Solid	DI Leach	
890-5972-6	PH02B	Soluble	Solid	DI Leach	
890-5972-7	PH03	Soluble	Solid	DI Leach	
890-5972-8	PH03A	Soluble	Solid	DI Leach	
890-5972-9	PH03B	Soluble	Solid	DI Leach	
890-5972-10	PH04	Soluble	Solid	DI Leach	
890-5972-11	PH04A	Soluble	Solid	DI Leach	
890-5972-12	PH04B	Soluble	Solid	DI Leach	
890-5972-13	PH05	Soluble	Solid	DI Leach	
890-5972-14	PH05A	Soluble	Solid	DI Leach	
890-5972-15	PH05B	Soluble	Solid	DI Leach	
890-5972-16	PH06	Soluble	Solid	DI Leach	
890-5972-17	PH06A	Soluble	Solid	DI Leach	
890-5972-18	PH06B	Soluble	Solid	DI Leach	
MB 880-71003/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71003/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71003/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5972-1 MS	PH01	Soluble	Solid	DI Leach	
890-5972-1 MSD	PH01	Soluble	Solid	DI Leach	
890-5972-11 MS	PH04A	Soluble	Solid	DI Leach	
890-5972-11 MSD	PH04A	Soluble	Solid	DI Leach	

Analysis Batch: 71077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5972-1	PH01	Soluble	Solid	300.0	71003
890-5972-2	PH01A	Soluble	Solid	300.0	71003
890-5972-3	PH01B	Soluble	Solid	300.0	71003
890-5972-4	PH02	Soluble	Solid	300.0	71003
890-5972-5	PH02A	Soluble	Solid	300.0	71003
890-5972-6	PH02B	Soluble	Solid	300.0	71003
890-5972-7	PH03	Soluble	Solid	300.0	71003
890-5972-8	PH03A	Soluble	Solid	300.0	71003
890-5972-9	PH03B	Soluble	Solid	300.0	71003
890-5972-10	PH04	Soluble	Solid	300.0	71003
890-5972-11	PH04A	Soluble	Solid	300.0	71003
890-5972-12	PH04B	Soluble	Solid	300.0	71003
890-5972-13	PH05	Soluble	Solid	300.0	71003
890-5972-14	PH05A	Soluble	Solid	300.0	71003
890-5972-15	PH05B	Soluble	Solid	300.0	71003
890-5972-16	PH06	Soluble	Solid	300.0	71003
890-5972-17	PH06A	Soluble	Solid	300.0	71003
890-5972-18	PH06B	Soluble	Solid	300.0	71003
MB 880-71003/1-A	Method Blank	Soluble	Solid	300.0	71003
LCS 880-71003/2-A	Lab Control Sample	Soluble	Solid	300.0	71003
LCSD 880-71003/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71003
890-5972-1 MS	PH01	Soluble	Solid	300.0	71003
890-5972-1 MSD	PH01	Soluble	Solid	300.0	71003

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QC Association Summary

Client: Ensolum
Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
SDG: 03C1558303

HPLC/IC (Continued)

Analysis Batch: 71077 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5972-11 MS	PH04A	Soluble	Solid	300.0	71003
890-5972-11 MSD	PH04A	Soluble	Solid	300.0	71003

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Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH01

Lab Sample ID: 890-5972-1

Date Collected: 01/12/24 10:35

Matrix: Solid

Date Received: 01/15/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 00:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 00:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 10:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 10:47	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		5			71077	01/17/24 20:43	CH	EET MID

Client Sample ID: PH01A

Lab Sample ID: 890-5972-2

Date Collected: 01/12/24 10:55

Matrix: Solid

Date Received: 01/15/24 09:05

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	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 00:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 00:38	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 11:55	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 11:55	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		10			71077	01/17/24 20:59	CH	EET MID

Client Sample ID: PH01B

Lab Sample ID: 890-5972-3

Date Collected: 01/12/24 11:00

Matrix: Solid

Date Received: 01/15/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 00:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 00:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 12:18	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 12:18	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		1			71077	01/17/24 21:04	CH	EET MID

Client Sample ID: PH02

Lab Sample ID: 890-5972-4

Date Collected: 01/12/24 12:50

Matrix: Solid

Date Received: 01/15/24 09:05

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	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 01:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 01:18	SM	EET MID

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Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH02

Lab Sample ID: 890-5972-4

Date Collected: 01/12/24 12:50

Matrix: Solid

Date Received: 01/15/24 09:05

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			71081	01/17/24 12:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 12:39	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		5			71077	01/17/24 21:09	CH	EET MID

Client Sample ID: PH02A

Lab Sample ID: 890-5972-5

Date Collected: 01/12/24 13:05

Matrix: Solid

Date Received: 01/15/24 09:05

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	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 01:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 01:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 13:00	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 13:00	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		10			71077	01/17/24 21:14	CH	EET MID

Client Sample ID: PH02B

Lab Sample ID: 890-5972-6

Date Collected: 01/12/24 13:30

Matrix: Solid

Date Received: 01/15/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 01:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 01:59	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 13:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 13:22	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		1			71077	01/17/24 21:30	CH	EET MID

Client Sample ID: PH03

Lab Sample ID: 890-5972-7

Date Collected: 01/12/24 13:40

Matrix: Solid

Date Received: 01/15/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 02:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 02:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 13:43	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 13:43	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
SDG: 03C1558303

Client Sample ID: PH03

Lab Sample ID: 890-5972-7

Date Collected: 01/12/24 13:40

Matrix: Solid

Date Received: 01/15/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		5			71077	01/17/24 21:35	CH	EET MID

Client Sample ID: PH03A

Lab Sample ID: 890-5972-8

Date Collected: 01/12/24 13:45

Matrix: Solid

Date Received: 01/15/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 02:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 02:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 14:05	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 14:05	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		5			71077	01/17/24 21:40	CH	EET MID

Client Sample ID: PH03B

Lab Sample ID: 890-5972-9

Date Collected: 01/12/24 14:10

Matrix: Solid

Date Received: 01/15/24 09:05

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	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 03:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 03:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 14:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 14:26	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		1			71077	01/17/24 21:45	CH	EET MID

Client Sample ID: PH04

Lab Sample ID: 890-5972-10

Date Collected: 01/12/24 14:25

Matrix: Solid

Date Received: 01/15/24 09:05

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	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 03:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 03:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 15:34	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 15:34	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		5			71077	01/17/24 21:50	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH04A

Lab Sample ID: 890-5972-11

Date Collected: 01/12/24 14:35

Matrix: Solid

Date Received: 01/15/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 05:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 05:11	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 15:55	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 15:55	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		5			71077	01/17/24 21:55	CH	EET MID

Client Sample ID: PH04B

Lab Sample ID: 890-5972-12

Date Collected: 01/12/24 14:55

Matrix: Solid

Date Received: 01/15/24 09:05

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	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 05:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 05:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 16:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 16:17	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		1			71077	01/17/24 22:11	CH	EET MID

Client Sample ID: PH05

Lab Sample ID: 890-5972-13

Date Collected: 01/12/24 15:00

Matrix: Solid

Date Received: 01/15/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 05:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 05:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 16:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 16:38	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		5			71077	01/17/24 22:16	CH	EET MID

Client Sample ID: PH05A

Lab Sample ID: 890-5972-14

Date Collected: 01/12/24 15:05

Matrix: Solid

Date Received: 01/15/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 06:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 06:13	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH05A

Lab Sample ID: 890-5972-14

Date Collected: 01/12/24 15:05

Matrix: Solid

Date Received: 01/15/24 09:05

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			71081	01/17/24 17:00	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 17:00	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		10			71077	01/17/24 22:31	CH	EET MID

Client Sample ID: PH05B

Lab Sample ID: 890-5972-15

Date Collected: 01/12/24 15:30

Matrix: Solid

Date Received: 01/15/24 09:05

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	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 06:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 06:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 17:21	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 17:21	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		1			71077	01/17/24 22:36	CH	EET MID

Client Sample ID: PH06

Lab Sample ID: 890-5972-16

Date Collected: 01/12/24 15:40

Matrix: Solid

Date Received: 01/15/24 09:05

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	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 06:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 06:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 17:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 17:42	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		5			71077	01/17/24 22:41	CH	EET MID

Client Sample ID: PH06A

Lab Sample ID: 890-5972-17

Date Collected: 01/12/24 16:00

Matrix: Solid

Date Received: 01/15/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 07:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 07:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 18:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 18:04	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Client Sample ID: PH06A
 Date Collected: 01/12/24 16:00
 Date Received: 01/15/24 09:05

Lab Sample ID: 890-5972-17
 Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		5			71077	01/17/24 22:47	CH	EET MID

Client Sample ID: PH06B
 Date Collected: 01/12/24 16:05
 Date Received: 01/15/24 09:05

Lab Sample ID: 890-5972-18
 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			5.02 g	5 mL	71132	01/18/24 14:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71154	01/20/24 07:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71369	01/20/24 07:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			71081	01/17/24 18:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71032	01/17/24 18:25	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	71003	01/16/24 13:52	SA	EET MID
Soluble	Analysis	300.0		1			71077	01/17/24 22:52	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
SDG: 03C1558303

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	T104704400-23-26	06-30-24

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

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Ensolum
Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
SDG: 03C1558303

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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



Sample Summary

Client: Ensolum
 Project/Site: PLU 17 Twin Wells Ranch 702H

Job ID: 890-5972-1
 SDG: 03C1558303

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5972-1	PH01	Solid	01/12/24 10:35	01/15/24 09:05	0.5'
890-5972-2	PH01A	Solid	01/12/24 10:55	01/15/24 09:05	4'
890-5972-3	PH01B	Solid	01/12/24 11:00	01/15/24 09:05	6'
890-5972-4	PH02	Solid	01/12/24 12:50	01/15/24 09:05	0.5'
890-5972-5	PH02A	Solid	01/12/24 13:05	01/15/24 09:05	3'
890-5972-6	PH02B	Solid	01/12/24 13:30	01/15/24 09:05	8'
890-5972-7	PH03	Solid	01/12/24 13:40	01/15/24 09:05	0.5'
890-5972-8	PH03A	Solid	01/12/24 13:45	01/15/24 09:05	1'
890-5972-9	PH03B	Solid	01/12/24 14:10	01/15/24 09:05	8'
890-5972-10	PH04	Solid	01/12/24 14:25	01/15/24 09:05	0.5'
890-5972-11	PH04A	Solid	01/12/24 14:35	01/15/24 09:05	2'
890-5972-12	PH04B	Solid	01/12/24 14:55	01/15/24 09:05	8'
890-5972-13	PH05	Solid	01/12/24 15:00	01/15/24 09:05	0.5'
890-5972-14	PH05A	Solid	01/12/24 15:05	01/15/24 09:05	1'
890-5972-15	PH05B	Solid	01/12/24 15:30	01/15/24 09:05	8'
890-5972-16	PH06	Solid	01/12/24 15:40	01/15/24 09:05	0.5'
890-5972-17	PH06A	Solid	01/12/24 16:00	01/15/24 09:05	4'
890-5972-18	PH06B	Solid	01/12/24 16:05	01/15/24 09:05	6'

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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



Environment Testing

Xenco

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Ben Bellu	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	Email:	bbell11@ensolum.com

Project Name:	PLU 17 TWIN WELLS RANCH Turn Around	ANALYSIS REQUEST	Preservative Codes
P Project Number:	03C1558303		None: NO DI Water: H ₂ O
Project Location:	32.20756, 103.80537	890-5972 Chain of Custody	Cool: Cool MeOH: Me
Sampler's Name:	Meredith Roberts		HCL: HC HNO ₃ : HN
P O #:			H ₂ SO ₄ : H ₂ NaOH: Na

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters		Sample Comments
							Temp: Blank	Wet Ice	
PH01	S	1/12/24	1035	0.5'	G	1	Yes	No	Incident #:
PH01A			1055	4'			Yes	No	NAPP2335329164
PH01B			1100	6'			Yes	No	Cost Center:
PH02			1250	0.5'			Yes	No	2203571001
PH02A			1305	3'			Yes	No	mrobert@ensolum.com
PH02B			1330	8'			Yes	No	
PH03			1340	0.5'			Yes	No	
PH03A			1345	1'			Yes	No	
PH03B			1410	8'			Yes	No	
PH04			1425	0.5'			Yes	No	

Total 2007/6010 2008/6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP/SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631/245.1/7470/7471

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Meredith Roberts</i>	<i>aldr</i>	9:05 1/12			



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

Environment Testing
Xenco



Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager: Ben Belli
Company Name: Enselum, LLC
Address: 3122 Nat'l Parks Hwy
City, State ZIP: Carlsbad, NM 88220
Phone: 989-854-0852

Bill to: (if different)
Company Name: Garrett Green
Address: XTO Energy St
City, State ZIP: Carlsbad, NM 88220
Email: bbelli@ensolum.com

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters		Pres. Code	ANALYSIS REQUEST	Preservative Codes
							Yes	No			
PH04A	S	1/13/24	1435	2'	G	1					None: NO DI Water: H ₂ O Cool: Cool MeOH: Me HCL: HC HNO ₃ : HN H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SACP
PH04B			1455	8'							
PH05			1500	0.5'							
PH05A			1505	1'							
PH05B			1530	8'							
PH06			1540	0.5'							
PH06A			1600	4'							
PH06B			1605	6'							

Handwritten notes in table:
- PH04A: X BTX, X Chlorides, X TPH
- Incident #: NAPP2355329764
- Cost Center: 2203371001
- Email: mmbertis@ensolum.com

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and sub-contractors. 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
<i>Mercedes</i>	<i>abebe</i>	6:05 1/13			

Revised Date: 08/25/2020 Rev. 2020.2



Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5972-1

SDG Number: 03C1558303

Login Number: 5972

List Number: 1

Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5972-1

SDG Number: 03C1558303

Login Number: 5972

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 01/16/24 12:15 PM

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

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Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
 Ensolum
 601 N. Marienfeld St.
 Suite 400
 Midland, Texas 79701
 Generated 1/30/2024 2:19:53 PM

JOB DESCRIPTION

PLU 17 TWIN WELLS RANCH 702H
 03C1558303

JOB NUMBER

890-5986-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
1/30/2024 2:19:53 PM

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

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Client: Ensolum
Project/Site: PLU 17 TWIN WELLS RANCH 702H

Laboratory Job ID: 890-5986-1
SDG: 03C1558303

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Definitions/Glossary

Client: Ensolum
Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
SDG: 03C1558303

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

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.
α	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: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1

Job ID: 890-5986-1

Eurofins Carlsbad

Job Narrative 890-5986-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 1/18/2024 8:12 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 -0.6°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH 07 (890-5986-1), PH 07A (890-5986-2), PH 07B (890-5986-3), PH 08 (890-5986-4), PH 08A (890-5986-5), PH 08B (890-5986-6), PH 09 (890-5986-7), PH 09A (890-5986-8), PH 10 (890-5986-9), PH 10A (890-5986-10), PH 10B (890-5986-11), PH 11 (890-5986-12), PH 11A (890-5986-13), PH 11B (890-5986-14), PH 12 (890-5986-15), PH 12A (890-5986-16), PH 12B (890-5986-17), PH 13 (890-5986-18), PH 13A (890-5986-19), PH 14 (890-5986-20), PH 14A (890-5986-21), PH 14B (890-5986-22), PH 15 (890-5986-23), PH 15A (890-5986-24), PH 15B (890-5986-25), PH 16 (890-5986-26), PH 16A (890-5986-27), PH 16B (890-5986-28), PH 17 (890-5986-29) and PH 17A (890-5986-30).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-71518 and analytical batch 880-71762 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: The surrogate recovery for the blank associated with preparation batch 880-71518 and analytical batch 880-71762 was outside the upper control limits.

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-71631 and analytical batch 880-71765 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-71534 and 880-71631 and analytical batch 880-71765 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH 12A (890-5986-16), PH 13 (890-5986-18), PH 15A (890-5986-24) and PH 16 (890-5986-26). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-71631 and analytical batch 880-71765 recovered outside control limits for the following analytes: m-Xylene & p-Xylene. Since only an acceptable LCS is required per the method, the data has been qualified and reported.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-71254/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: PH 14B (890-5986-22), PH 15 (890-5986-23), PH 15A (890-5986-24) and PH 16B (890-5986-28). Evidence of matrix interference is present; therefore, re-

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Case Narrative

Client: Ensolum
Project: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1

Job ID: 890-5986-1 (Continued)

Eurofins Carlsbad

extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-71254 and analytical batch 880-71766 was outside control limits. Sample non-homogeneity is suspected.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-71228 and 880-71228 and analytical batch 880-71388 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: Spike compounds were inadvertently doubled for the matrix spike/matrix spike duplicate (MS/MSD) for preparation batch 880-71228 and analytical batch 880-71388. The associated laboratory control sample (LCS) met acceptance criteria.

PH 15A (890-5986-24), (890-5986-A-24-B MS) and (890-5986-A-24-C MSD)

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

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 07

Lab Sample ID: 890-5986-1

Date Collected: 01/16/24 09:40

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 18:58	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 18:58	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 18:58	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/24/24 14:18	01/28/24 18:58	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 18:58	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/24/24 14:18	01/28/24 18:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	01/24/24 14:18	01/28/24 18:58	1
1,4-Difluorobenzene (Surr)	86		70 - 130	01/24/24 14:18	01/28/24 18:58	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			01/28/24 18:58	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			01/28/24 10:51	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	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 10:51	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 10:51	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 10:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	01/19/24 17:09	01/28/24 10:51	1
o-Terphenyl	96		70 - 130	01/19/24 17:09	01/28/24 10:51	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2520		24.8	mg/Kg			01/24/24 13:28	5

Client Sample ID: PH 07A

Lab Sample ID: 890-5986-2

Date Collected: 01/16/24 09:45

Matrix: Solid

Date Received: 01/18/24 08:12

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		01/24/24 14:18	01/28/24 19:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 19:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 19:18	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/24/24 14:18	01/28/24 19:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 19:18	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/24/24 14:18	01/28/24 19:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	01/24/24 14:18	01/28/24 19:18	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 07A

Lab Sample ID: 890-5986-2

Date Collected: 01/16/24 09:45

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 1'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	94		70 - 130	01/24/24 14:18	01/28/24 19:18	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			01/28/24 19:18	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			01/28/24 11:59	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		01/19/24 17:09	01/28/24 11:59	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		01/19/24 17:09	01/28/24 11:59	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		01/19/24 17:09	01/28/24 11:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130	01/19/24 17:09	01/28/24 11:59	1
o-Terphenyl	87		70 - 130	01/19/24 17:09	01/28/24 11:59	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2230		25.1	mg/Kg			01/24/24 13:34	5

Client Sample ID: PH 07B

Lab Sample ID: 890-5986-3

Date Collected: 01/16/24 10:05

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 6'

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		01/24/24 14:18	01/28/24 19:39	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/24/24 14:18	01/28/24 19:39	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/24/24 14:18	01/28/24 19:39	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/24/24 14:18	01/28/24 19:39	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/24/24 14:18	01/28/24 19:39	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/24/24 14:18	01/28/24 19:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	01/24/24 14:18	01/28/24 19:39	1
1,4-Difluorobenzene (Surr)	93		70 - 130	01/24/24 14:18	01/28/24 19:39	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			01/28/24 19:39	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			01/28/24 12:20	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 07B

Lab Sample ID: 890-5986-3

Date Collected: 01/16/24 10:05

Matrix: Solid

Date Received: 01/18/24 08:12

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	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 12:20	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 12:20	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 12:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	01/19/24 17:09	01/28/24 12:20	1
o-Terphenyl	100		70 - 130	01/19/24 17:09	01/28/24 12:20	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	120		4.98	mg/Kg			01/24/24 13:39	1

Client Sample ID: PH 08

Lab Sample ID: 890-5986-4

Date Collected: 01/16/24 10:35

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 0.5'

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		01/24/24 14:18	01/28/24 19:59	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/24/24 14:18	01/28/24 19:59	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/24/24 14:18	01/28/24 19:59	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/24/24 14:18	01/28/24 19:59	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/24/24 14:18	01/28/24 19:59	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/24/24 14:18	01/28/24 19:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	01/24/24 14:18	01/28/24 19:59	1
1,4-Difluorobenzene (Surr)	90		70 - 130	01/24/24 14:18	01/28/24 19:59	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			01/28/24 19:59	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			01/28/24 12:43	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	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 12:43	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 12:43	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 12:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130	01/19/24 17:09	01/28/24 12:43	1
o-Terphenyl	83		70 - 130	01/19/24 17:09	01/28/24 12:43	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 08

Lab Sample ID: 890-5986-4

Date Collected: 01/16/24 10:35
 Date Received: 01/18/24 08:12
 Sample Depth: 0.5'

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2270		25.0	mg/Kg			01/24/24 13:44	5

Client Sample ID: PH 08A

Lab Sample ID: 890-5986-5

Date Collected: 01/16/24 10:45
 Date Received: 01/18/24 08:12
 Sample Depth: 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		01/24/24 14:18	01/28/24 20:20	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 20:20	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 20:20	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/24/24 14:18	01/28/24 20:20	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 20:20	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/24/24 14:18	01/28/24 20:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			01/24/24 14:18	01/28/24 20:20	1
1,4-Difluorobenzene (Surr)	97		70 - 130			01/24/24 14:18	01/28/24 20:20	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			01/28/24 20:20	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			01/28/24 13:05	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		01/19/24 17:09	01/28/24 13:05	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/19/24 17:09	01/28/24 13:05	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/19/24 17:09	01/28/24 13:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130			01/19/24 17:09	01/28/24 13:05	1
o-Terphenyl	83		70 - 130			01/19/24 17:09	01/28/24 13:05	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2910		25.1	mg/Kg			01/24/24 13:59	5

Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 08B

Lab Sample ID: 890-5986-6

Date Collected: 01/16/24 11:00

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 6'

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		01/24/24 14:18	01/28/24 20:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 20:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 20:40	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/24/24 14:18	01/28/24 20:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 20:40	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/24/24 14:18	01/28/24 20:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	01/24/24 14:18	01/28/24 20:40	1
1,4-Difluorobenzene (Surr)	91		70 - 130	01/24/24 14:18	01/28/24 20:40	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			01/28/24 20:40	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			01/28/24 13:29	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		01/19/24 17:09	01/28/24 13:29	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2	mg/Kg		01/19/24 17:09	01/28/24 13:29	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		01/19/24 17:09	01/28/24 13:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	77		70 - 130	01/19/24 17:09	01/28/24 13:29	1
o-Terphenyl	84		70 - 130	01/19/24 17:09	01/28/24 13:29	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	111		5.03	mg/Kg			01/24/24 14:04	1

Client Sample ID: PH 09

Lab Sample ID: 890-5986-7

Date Collected: 01/17/24 15:05

Matrix: Solid

Date Received: 01/18/24 08:12

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		01/24/24 14:18	01/28/24 21:00	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/24/24 14:18	01/28/24 21:00	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/24/24 14:18	01/28/24 21:00	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/24/24 14:18	01/28/24 21:00	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/24/24 14:18	01/28/24 21:00	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/24/24 14:18	01/28/24 21:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	01/24/24 14:18	01/28/24 21:00	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 09

Lab Sample ID: 890-5986-7

Date Collected: 01/17/24 15:05

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	90		70 - 130	01/24/24 14:18	01/28/24 21:00	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			01/28/24 21:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			01/28/24 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	<50.4	U	50.4	mg/Kg		01/19/24 17:09	01/28/24 13:51	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4	mg/Kg		01/19/24 17:09	01/28/24 13:51	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		01/19/24 17:09	01/28/24 13:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130	01/19/24 17:09	01/28/24 13:51	1
o-Terphenyl	84		70 - 130	01/19/24 17:09	01/28/24 13:51	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42.9		5.05	mg/Kg			01/24/24 14:20	1

Client Sample ID: PH 09A

Lab Sample ID: 890-5986-8

Date Collected: 01/17/24 15:10

Matrix: Solid

Date Received: 01/18/24 08:12

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		01/24/24 14:18	01/28/24 22:50	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/24/24 14:18	01/28/24 22:50	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/24/24 14:18	01/28/24 22:50	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/24/24 14:18	01/28/24 22:50	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/24/24 14:18	01/28/24 22:50	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/24/24 14:18	01/28/24 22:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130	01/24/24 14:18	01/28/24 22:50	1
1,4-Difluorobenzene (Surr)	97		70 - 130	01/24/24 14:18	01/28/24 22:50	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			01/28/24 22:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			01/28/24 14:13	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
SDG: 03C1558303

Client Sample ID: PH 09A

Lab Sample ID: 890-5986-8

Date Collected: 01/17/24 15:10

Matrix: Solid

Date Received: 01/18/24 08:12

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	<50.5	U	50.5	mg/Kg		01/19/24 17:09	01/28/24 14:13	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		01/19/24 17:09	01/28/24 14:13	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		01/19/24 17:09	01/28/24 14:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130	01/19/24 17:09	01/28/24 14:13	1
o-Terphenyl	87		70 - 130	01/19/24 17:09	01/28/24 14:13	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.0		5.04	mg/Kg			01/24/24 14:25	1

Client Sample ID: PH 10

Lab Sample ID: 890-5986-9

Date Collected: 01/16/24 12:30

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 23:11	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 23:11	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 23:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/24/24 14:18	01/28/24 23:11	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 23:11	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/24/24 14:18	01/28/24 23:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	01/24/24 14:18	01/28/24 23:11	1
1,4-Difluorobenzene (Surr)	107		70 - 130	01/24/24 14:18	01/28/24 23:11	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			01/28/24 23:11	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			01/28/24 14:35	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	<49.7	U	49.7	mg/Kg		01/19/24 17:09	01/28/24 14:35	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		01/19/24 17:09	01/28/24 14:35	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		01/19/24 17:09	01/28/24 14:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130	01/19/24 17:09	01/28/24 14:35	1
o-Terphenyl	83		70 - 130	01/19/24 17:09	01/28/24 14:35	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 10

Lab Sample ID: 890-5986-9

Date Collected: 01/16/24 12:30

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 0.5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2680		24.9	mg/Kg			01/24/24 14:30	5

Client Sample ID: PH 10A

Lab Sample ID: 890-5986-10

Date Collected: 01/16/24 12:50

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 23:31	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 23:31	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 23:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/24/24 14:18	01/28/24 23:31	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/24/24 14:18	01/28/24 23:31	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/24/24 14:18	01/28/24 23:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			01/24/24 14:18	01/28/24 23:31	1
1,4-Difluorobenzene (Surr)	107		70 - 130			01/24/24 14:18	01/28/24 23:31	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			01/28/24 23:31	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/28/24 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	<49.9	U	49.9	mg/Kg		01/19/24 17:09	01/28/24 14:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/19/24 17:09	01/28/24 14:57	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/19/24 17:09	01/28/24 14:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130			01/19/24 17:09	01/28/24 14:57	1
o-Terphenyl	96		70 - 130			01/19/24 17:09	01/28/24 14:57	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1150		4.97	mg/Kg			01/24/24 14:35	1

Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 10B

Lab Sample ID: 890-5986-11

Date Collected: 01/16/24 13:10

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 10'

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		01/24/24 14:18	01/28/24 23:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 23:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 23:52	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/24/24 14:18	01/28/24 23:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 23:52	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/24/24 14:18	01/28/24 23:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	01/24/24 14:18	01/28/24 23:52	1
1,4-Difluorobenzene (Surr)	104		70 - 130	01/24/24 14:18	01/28/24 23:52	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			01/28/24 23:52	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			01/28/24 15:41	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	<49.8	U	49.8	mg/Kg		01/19/24 17:09	01/28/24 15:41	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		01/19/24 17:09	01/28/24 15:41	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		01/19/24 17:09	01/28/24 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130	01/19/24 17:09	01/28/24 15:41	1
o-Terphenyl	93		70 - 130	01/19/24 17:09	01/28/24 15:41	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	89.5		4.99	mg/Kg			01/24/24 14:40	1

Client Sample ID: PH 11

Lab Sample ID: 890-5986-12

Date Collected: 01/17/24 13:40

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 02:15	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 02:15	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 02:15	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/25/24 17:57	01/30/24 02:15	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 02:15	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:57	01/30/24 02:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	01/25/24 17:57	01/30/24 02:15	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 11

Lab Sample ID: 890-5986-12

Date Collected: 01/17/24 13:40

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	87		70 - 130	01/25/24 17:57	01/30/24 02:15	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			01/30/24 02:15	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			01/28/24 16:02	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		01/19/24 17:09	01/28/24 16:02	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		01/19/24 17:09	01/28/24 16:02	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		01/19/24 17:09	01/28/24 16:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130	01/19/24 17:09	01/28/24 16:02	1
o-Terphenyl	100		70 - 130	01/19/24 17:09	01/28/24 16:02	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2460		25.1	mg/Kg			01/24/24 14:45	5

Client Sample ID: PH 11A

Lab Sample ID: 890-5986-13

Date Collected: 01/17/24 13:50

Matrix: Solid

Date Received: 01/18/24 08:12

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		01/25/24 17:57	01/30/24 02:41	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 02:41	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 02:41	1
m-Xylene & p-Xylene	<0.00398	U**	0.00398	mg/Kg		01/25/24 17:57	01/30/24 02:41	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 02:41	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:57	01/30/24 02:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	01/25/24 17:57	01/30/24 02:41	1
1,4-Difluorobenzene (Surr)	113		70 - 130	01/25/24 17:57	01/30/24 02:41	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			01/30/24 02:41	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			01/28/24 16:26	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 11A

Lab Sample ID: 890-5986-13

Date Collected: 01/17/24 13:50

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1	mg/Kg		01/19/24 17:09	01/28/24 16:26	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		01/19/24 17:09	01/28/24 16:26	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		01/19/24 17:09	01/28/24 16:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130			01/19/24 17:09	01/28/24 16:26	1
o-Terphenyl	93		70 - 130			01/19/24 17:09	01/28/24 16:26	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2920		24.8	mg/Kg			01/24/24 14:51	5

Client Sample ID: PH 11B

Lab Sample ID: 890-5986-14

Date Collected: 01/17/24 14:00

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 4'

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		01/25/24 17:57	01/30/24 03:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 03:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 03:07	1
m-Xylene & p-Xylene	<0.00399	U *	0.00399	mg/Kg		01/25/24 17:57	01/30/24 03:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 03:07	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/25/24 17:57	01/30/24 03:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			01/25/24 17:57	01/30/24 03:07	1
1,4-Difluorobenzene (Surr)	109		70 - 130			01/25/24 17:57	01/30/24 03:07	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			01/30/24 03:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			01/28/24 16:46	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	<50.5	U	50.5	mg/Kg		01/19/24 17:09	01/28/24 16:46	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		01/19/24 17:09	01/28/24 16:46	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		01/19/24 17:09	01/28/24 16:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130			01/19/24 17:09	01/28/24 16:46	1
o-Terphenyl	89		70 - 130			01/19/24 17:09	01/28/24 16:46	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 11B

Lab Sample ID: 890-5986-14

Date Collected: 01/17/24 14:00

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 4'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.3		5.05	mg/Kg			01/24/24 11:28	1

Client Sample ID: PH 12

Lab Sample ID: 890-5986-15

Date Collected: 01/17/24 13:10

Matrix: Solid

Date Received: 01/18/24 08:12

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		01/25/24 17:57	01/30/24 03:32	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 03:32	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 03:32	1
m-Xylene & p-Xylene	<0.00402	U **	0.00402	mg/Kg		01/25/24 17:57	01/30/24 03:32	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 03:32	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/25/24 17:57	01/30/24 03:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			01/25/24 17:57	01/30/24 03:32	1
1,4-Difluorobenzene (Surr)	90		70 - 130			01/25/24 17:57	01/30/24 03:32	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			01/30/24 03:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			01/28/24 17:07	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	<50.5	U	50.5	mg/Kg		01/19/24 17:09	01/28/24 17:07	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		01/19/24 17:09	01/28/24 17:07	1
Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		01/19/24 17:09	01/28/24 17:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130			01/19/24 17:09	01/28/24 17:07	1
o-Terphenyl	91		70 - 130			01/19/24 17:09	01/28/24 17:07	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2570		25.1	mg/Kg			01/24/24 11:48	5

Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 12A

Lab Sample ID: 890-5986-16

Date Collected: 01/17/24 13:30

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 4'

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		01/25/24 17:57	01/30/24 03:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 03:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 03:58	1
m-Xylene & p-Xylene	<0.00401	U **	0.00401	mg/Kg		01/25/24 17:57	01/30/24 03:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 03:58	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/25/24 17:57	01/30/24 03:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	59	S1-	70 - 130	01/25/24 17:57	01/30/24 03:58	1
1,4-Difluorobenzene (Surr)	104		70 - 130	01/25/24 17:57	01/30/24 03:58	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			01/30/24 03:58	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			01/28/24 17:28	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		01/19/24 17:09	01/28/24 17:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/19/24 17:09	01/28/24 17:28	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/19/24 17:09	01/28/24 17:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	01/19/24 17:09	01/28/24 17:28	1
o-Terphenyl	100		70 - 130	01/19/24 17:09	01/28/24 17:28	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5540		49.8	mg/Kg			01/24/24 14:40	10

Client Sample ID: PH 12B

Lab Sample ID: 890-5986-17

Date Collected: 01/17/24 13:35

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 6'

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		01/25/24 17:57	01/30/24 04:24	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 04:24	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 04:24	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/25/24 17:57	01/30/24 04:24	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 04:24	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:57	01/30/24 04:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		70 - 130	01/25/24 17:57	01/30/24 04:24	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 12B

Lab Sample ID: 890-5986-17

Date Collected: 01/17/24 13:35

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 6'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	90		70 - 130	01/25/24 17:57	01/30/24 04:24	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			01/30/24 04:24	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			01/28/24 17:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/19/24 17:09	01/28/24 17:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/19/24 17:09	01/28/24 17:49	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/19/24 17:09	01/28/24 17:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130	01/19/24 17:09	01/28/24 17:49	1
o-Terphenyl	82		70 - 130	01/19/24 17:09	01/28/24 17:49	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	454		4.99	mg/Kg			01/24/24 14:46	1

Client Sample ID: PH 13

Lab Sample ID: 890-5986-18

Date Collected: 01/17/24 13:00

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 04:50	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 04:50	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 04:50	1
m-Xylene & p-Xylene	<0.00398	U**	0.00398	mg/Kg		01/25/24 17:57	01/30/24 04:50	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 04:50	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:57	01/30/24 04:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	01/25/24 17:57	01/30/24 04:50	1
1,4-Difluorobenzene (Surr)	67	S1-	70 - 130	01/25/24 17:57	01/30/24 04:50	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			01/30/24 04:50	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			01/28/24 18:10	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 13

Lab Sample ID: 890-5986-18

Date Collected: 01/17/24 13:00

Matrix: Solid

Date Received: 01/18/24 08:12

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	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 18:10	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 18:10	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/19/24 17:09	01/28/24 18:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130			01/19/24 17:09	01/28/24 18:10	1
o-Terphenyl	94		70 - 130			01/19/24 17:09	01/28/24 18:10	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.48		4.96	mg/Kg			01/24/24 14:53	1

Client Sample ID: PH 13A

Lab Sample ID: 890-5986-19

Date Collected: 01/17/24 13:05

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 1'0

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		01/25/24 17:57	01/30/24 05:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 05:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 05:16	1
m-Xylene & p-Xylene	<0.00399	U *	0.00399	mg/Kg		01/25/24 17:57	01/30/24 05:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 05:16	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/25/24 17:57	01/30/24 05:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			01/25/24 17:57	01/30/24 05:16	1
1,4-Difluorobenzene (Surr)	96		70 - 130			01/25/24 17:57	01/30/24 05:16	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			01/30/24 05:16	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			01/28/24 18:31	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		01/19/24 17:09	01/28/24 18:31	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2	mg/Kg		01/19/24 17:09	01/28/24 18:31	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		01/19/24 17:09	01/28/24 18:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130			01/19/24 17:09	01/28/24 18:31	1
o-Terphenyl	93		70 - 130			01/19/24 17:09	01/28/24 18:31	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 13A

Lab Sample ID: 890-5986-19

Date Collected: 01/17/24 13:05

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 1'0

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.33		5.03	mg/Kg			01/24/24 15:14	1

Client Sample ID: PH 14

Lab Sample ID: 890-5986-20

Date Collected: 01/17/24 12:35

Matrix: Solid

Date Received: 01/18/24 08:12

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		01/25/24 17:57	01/30/24 05:42	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 05:42	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 05:42	1
m-Xylene & p-Xylene	<0.00402	U **	0.00402	mg/Kg		01/25/24 17:57	01/30/24 05:42	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 05:42	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/25/24 17:57	01/30/24 05:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			01/25/24 17:57	01/30/24 05:42	1
1,4-Difluorobenzene (Surr)	112		70 - 130			01/25/24 17:57	01/30/24 05:42	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			01/30/24 05:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			01/28/24 18:51	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	<50.4	U	50.4	mg/Kg		01/19/24 17:09	01/28/24 18:51	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4	mg/Kg		01/19/24 17:09	01/28/24 18:51	1
Oll Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		01/19/24 17:09	01/28/24 18:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130			01/19/24 17:09	01/28/24 18:51	1
o-Terphenyl	84		70 - 130			01/19/24 17:09	01/28/24 18:51	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1590		25.1	mg/Kg			01/24/24 15:21	5

Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 14A

Lab Sample ID: 890-5986-21

Date Collected: 01/17/24 12:45

Matrix: Solid

Date Received: 01/18/24 08:12

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		01/25/24 17:57	01/30/24 07:26	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 07:26	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 07:26	1
m-Xylene & p-Xylene	<0.00401	U **	0.00401	mg/Kg		01/25/24 17:57	01/30/24 07:26	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 07:26	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/25/24 17:57	01/30/24 07:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130	01/25/24 17:57	01/30/24 07:26	1
1,4-Difluorobenzene (Surr)	79		70 - 130	01/25/24 17:57	01/30/24 07:26	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			01/30/24 07:26	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			01/29/24 10:30	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 F2	50.1	mg/Kg		01/19/24 17:22	01/29/24 10:30	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		01/19/24 17:22	01/29/24 10:30	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		01/19/24 17:22	01/29/24 10:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	122		70 - 130	01/19/24 17:22	01/29/24 10:30	1
o-Terphenyl	101		70 - 130	01/19/24 17:22	01/29/24 10:30	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	947		4.97	mg/Kg			01/24/24 15:28	1

Client Sample ID: PH 14B

Lab Sample ID: 890-5986-22

Date Collected: 01/17/24 12:55

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 07:53	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 07:53	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 07:53	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/25/24 17:57	01/30/24 07:53	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 07:53	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:57	01/30/24 07:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	01/25/24 17:57	01/30/24 07:53	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 14B

Lab Sample ID: 890-5986-22

Date Collected: 01/17/24 12:55

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	111		70 - 130	01/25/24 17:57	01/30/24 07:53	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			01/30/24 07:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	65.4		49.9	mg/Kg			01/29/24 11:35	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	<49.9	U	49.9	mg/Kg		01/19/24 17:22	01/29/24 11:35	1
Diesel Range Organics (Over C10-C28)	65.4		49.9	mg/Kg		01/19/24 17:22	01/29/24 11:35	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/19/24 17:22	01/29/24 11:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	135	S1+	70 - 130	01/19/24 17:22	01/29/24 11:35	1
o-Terphenyl	115		70 - 130	01/19/24 17:22	01/29/24 11:35	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	727		49.6	mg/Kg			01/24/24 15:34	10

Client Sample ID: PH 15

Lab Sample ID: 890-5986-23

Date Collected: 01/17/24 11:30

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 08:19	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 08:19	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 08:19	1
m-Xylene & p-Xylene	<0.00398	U*	0.00398	mg/Kg		01/25/24 17:57	01/30/24 08:19	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 08:19	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:57	01/30/24 08:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	01/25/24 17:57	01/30/24 08:19	1
1,4-Difluorobenzene (Surr)	113		70 - 130	01/25/24 17:57	01/30/24 08:19	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			01/30/24 08:19	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			01/29/24 11:56	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 15

Lab Sample ID: 890-5986-23

Date Collected: 01/17/24 11:30

Matrix: Solid

Date Received: 01/18/24 08:12

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	<49.7	U	49.7	mg/Kg		01/19/24 17:22	01/29/24 11:56	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		01/19/24 17:22	01/29/24 11:56	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		01/19/24 17:22	01/29/24 11:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	144	S1+	70 - 130			01/19/24 17:22	01/29/24 11:56	1
o-Terphenyl	113		70 - 130			01/19/24 17:22	01/29/24 11:56	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3980		25.2	mg/Kg			01/24/24 15:41	5

Client Sample ID: PH 15A

Lab Sample ID: 890-5986-24

Date Collected: 01/17/24 11:50

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 4'

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		01/25/24 17:57	01/30/24 08:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 08:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 08:45	1
m-Xylene & p-Xylene	<0.00399	U *	0.00399	mg/Kg		01/25/24 17:57	01/30/24 08:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 08:45	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/25/24 17:57	01/30/24 08:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130			01/25/24 17:57	01/30/24 08:45	1
1,4-Difluorobenzene (Surr)	133	S1+	70 - 130			01/25/24 17:57	01/30/24 08:45	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			01/30/24 08:45	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			01/29/24 12:18	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	mg/Kg		01/19/24 17:22	01/29/24 12:18	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		01/19/24 17:22	01/29/24 12:18	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		01/19/24 17:22	01/29/24 12:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	132	S1+	70 - 130			01/19/24 17:22	01/29/24 12:18	1
o-Terphenyl	109		70 - 130			01/19/24 17:22	01/29/24 12:18	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 15A

Lab Sample ID: 890-5986-24

Date Collected: 01/17/24 11:50

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 4'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2500	F1	25.2	mg/Kg			01/24/24 15:48	5

Client Sample ID: PH 15B

Lab Sample ID: 890-5986-25

Date Collected: 01/17/24 12:00

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 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		01/25/24 17:57	01/30/24 09:11	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 09:11	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 09:11	1
m-Xylene & p-Xylene	<0.00402	U **	0.00402	mg/Kg		01/25/24 17:57	01/30/24 09:11	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 09:11	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/25/24 17:57	01/30/24 09:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130			01/25/24 17:57	01/30/24 09:11	1
1,4-Difluorobenzene (Surr)	80		70 - 130			01/25/24 17:57	01/30/24 09:11	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			01/30/24 09:11	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			01/29/24 12:40	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		01/19/24 17:22	01/29/24 12:40	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		01/19/24 17:22	01/29/24 12:40	1
Oll Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		01/19/24 17:22	01/29/24 12:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	127		70 - 130			01/19/24 17:22	01/29/24 12:40	1
o-Terphenyl	103		70 - 130			01/19/24 17:22	01/29/24 12:40	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	92.2		4.98	mg/Kg			01/24/24 16:09	1

Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 16

Lab Sample ID: 890-5986-26

Date Collected: 01/17/24 12:05

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 09:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 09:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 09:37	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/25/24 17:57	01/30/24 09:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 09:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:57	01/30/24 09:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130	01/25/24 17:57	01/30/24 09:37	1
1,4-Difluorobenzene (Surr)	107		70 - 130	01/25/24 17:57	01/30/24 09:37	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			01/30/24 09:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			01/29/24 13:01	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	<50.5	U	50.5	mg/Kg		01/19/24 17:22	01/29/24 13:01	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		01/19/24 17:22	01/29/24 13:01	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		01/19/24 17:22	01/29/24 13:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	126		70 - 130	01/19/24 17:22	01/29/24 13:01	1
o-Terphenyl	99		70 - 130	01/19/24 17:22	01/29/24 13:01	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1710		25.1	mg/Kg			01/24/24 16:16	5

Client Sample ID: PH 16A

Lab Sample ID: 890-5986-27

Date Collected: 01/17/24 12:25

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 10:04	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 10:04	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 10:04	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		01/25/24 17:57	01/30/24 10:04	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/24 17:57	01/30/24 10:04	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/24 17:57	01/30/24 10:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	01/25/24 17:57	01/30/24 10:04	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 16A

Lab Sample ID: 890-5986-27

Date Collected: 01/17/24 12:25

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	82		70 - 130	01/25/24 17:57	01/30/24 10:04	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			01/30/24 10:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			01/29/24 13:23	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	<50.5	U	50.5	mg/Kg		01/19/24 17:22	01/29/24 13:23	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		01/19/24 17:22	01/29/24 13:23	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		01/19/24 17:22	01/29/24 13:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130	01/19/24 17:22	01/29/24 13:23	1
o-Terphenyl	101		70 - 130	01/19/24 17:22	01/29/24 13:23	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3070		25.1	mg/Kg			01/24/24 16:36	5

Client Sample ID: PH 16B

Lab Sample ID: 890-5986-28

Date Collected: 01/17/24 12:30

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 6'

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		01/25/24 17:57	01/30/24 10:30	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 10:30	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 10:30	1
m-Xylene & p-Xylene	<0.00399	U**	0.00399	mg/Kg		01/25/24 17:57	01/30/24 10:30	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 10:30	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/25/24 17:57	01/30/24 10:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130	01/25/24 17:57	01/30/24 10:30	1
1,4-Difluorobenzene (Surr)	108		70 - 130	01/25/24 17:57	01/30/24 10:30	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			01/30/24 10:30	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			01/29/24 13:45	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 16B

Lab Sample ID: 890-5986-28

Date Collected: 01/17/24 12:30

Matrix: Solid

Date Received: 01/18/24 08:12

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	<49.9	U	49.9	mg/Kg		01/19/24 17:22	01/29/24 13:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/19/24 17:22	01/29/24 13:45	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/19/24 17:22	01/29/24 13:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	139	S1+	70 - 130			01/19/24 17:22	01/29/24 13:45	1
o-Terphenyl	110		70 - 130			01/19/24 17:22	01/29/24 13:45	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.0		5.00	mg/Kg			01/24/24 16:43	1

Client Sample ID: PH 17

Lab Sample ID: 890-5986-29

Date Collected: 01/17/24 14:25

Matrix: Solid

Date Received: 01/18/24 08:12

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		01/25/24 17:57	01/30/24 10:56	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 10:56	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 10:56	1
m-Xylene & p-Xylene	<0.00402	U *	0.00402	mg/Kg		01/25/24 17:57	01/30/24 10:56	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/25/24 17:57	01/30/24 10:56	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/25/24 17:57	01/30/24 10:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130			01/25/24 17:57	01/30/24 10:56	1
1,4-Difluorobenzene (Surr)	97		70 - 130			01/25/24 17:57	01/30/24 10:56	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/30/24 10:56	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			01/29/24 14:06	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		01/19/24 17:22	01/29/24 14:06	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/19/24 17:22	01/29/24 14:06	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/19/24 17:22	01/29/24 14:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130			01/19/24 17:22	01/29/24 14:06	1
o-Terphenyl	99		70 - 130			01/19/24 17:22	01/29/24 14:06	1

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Client Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 17

Lab Sample ID: 890-5986-29

Date Collected: 01/17/24 14:25

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 0.5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2680		25.2	mg/Kg			01/24/24 16:50	5

Client Sample ID: PH 17A

Lab Sample ID: 890-5986-30

Date Collected: 01/17/24 14:40

Matrix: Solid

Date Received: 01/18/24 08:12

Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 11:22	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 11:22	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 11:22	1
m-Xylene & p-Xylene	<0.00401	U **	0.00401	mg/Kg		01/25/24 17:57	01/30/24 11:22	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 11:22	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/25/24 17:57	01/30/24 11:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			01/25/24 17:57	01/30/24 11:22	1
1,4-Difluorobenzene (Surr)	102		70 - 130			01/25/24 17:57	01/30/24 11:22	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			01/30/24 11:22	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			01/29/24 14:28	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		01/19/24 17:22	01/29/24 14:28	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/19/24 17:22	01/29/24 14:28	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/19/24 17:22	01/29/24 14:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130			01/19/24 17:22	01/29/24 14:28	1
o-Terphenyl	93		70 - 130			01/19/24 17:22	01/29/24 14:28	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26.6		5.05	mg/Kg			01/24/24 16:57	1

Surrogate Summary

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-5985-A-1-E MS	Matrix Spike	108	98
890-5985-A-1-F MSD	Matrix Spike Duplicate	114	107
890-5985-A-21-D MS	Matrix Spike	125	123
890-5985-A-21-E MSD	Matrix Spike Duplicate	95	88
890-5986-1	PH 07	104	86
890-5986-2	PH 07A	109	94
890-5986-3	PH 07B	104	93
890-5986-4	PH 08	103	90
890-5986-5	PH 08A	102	97
890-5986-6	PH 08B	115	91
890-5986-7	PH 09	107	90
890-5986-8	PH 09A	86	97
890-5986-9	PH 10	100	107
890-5986-10	PH 10A	110	107
890-5986-11	PH 10B	103	104
890-5986-12	PH 11	107	87
890-5986-13	PH 11A	101	113
890-5986-14	PH 11B	110	109
890-5986-15	PH 12	95	90
890-5986-16	PH 12A	59 S1-	104
890-5986-17	PH 12B	73	90
890-5986-18	PH 13	108	67 S1-
890-5986-19	PH 13A	108	96
890-5986-20	PH 14	103	112
890-5986-21	PH 14A	84	79
890-5986-22	PH 14B	108	111
890-5986-23	PH 15	104	113
890-5986-24	PH 15A	129	133 S1+
890-5986-25	PH 15B	113	80
890-5986-26	PH 16	136 S1+	107
890-5986-27	PH 16A	95	82
890-5986-28	PH 16B	126	108
890-5986-29	PH 17	123	97
890-5986-30	PH 17A	100	102
LCS 880-71518/1-A	Lab Control Sample	105	101
LCS 880-71631/1-A	Lab Control Sample	108	98
LCSD 880-71518/2-A	Lab Control Sample Dup	111	98
LCSD 880-71631/2-A	Lab Control Sample Dup	119	86
MB 880-71518/5-A	Method Blank	130	132 S1+
MB 880-71534/5-A	Method Blank	59 S1-	104
MB 880-71631/5-A	Method Blank	51 S1-	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Surrogate Summary

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-5986-1	PH 07	88	96
890-5986-1 MS	PH 07	91	82
890-5986-1 MSD	PH 07	98	90
890-5986-2	PH 07A	80	87
890-5986-3	PH 07B	90	100
890-5986-4	PH 08	78	83
890-5986-5	PH 08A	78	83
890-5986-6	PH 08B	77	84
890-5986-7	PH 09	81	84
890-5986-8	PH 09A	82	87
890-5986-9	PH 10	78	83
890-5986-10	PH 10A	88	96
890-5986-11	PH 10B	87	93
890-5986-12	PH 11	92	100
890-5986-13	PH 11A	86	93
890-5986-14	PH 11B	80	89
890-5986-15	PH 12	84	91
890-5986-16	PH 12A	90	100
890-5986-17	PH 12B	75	82
890-5986-18	PH 13	89	94
890-5986-19	PH 13A	88	93
890-5986-20	PH 14	78	84
890-5986-21	PH 14A	122	101
890-5986-21 MS	PH 14A	114	84
890-5986-21 MSD	PH 14A	122	89
890-5986-22	PH 14B	135 S1+	115
890-5986-23	PH 15	144 S1+	113
890-5986-24	PH 15A	132 S1+	109
890-5986-25	PH 15B	127	103
890-5986-26	PH 16	126	99
890-5986-27	PH 16A	124	101
890-5986-28	PH 16B	139 S1+	110
890-5986-29	PH 17	121	99
890-5986-30	PH 17A	113	93
LCS 880-71253/2-A	Lab Control Sample	82	91
LCS 880-71254/2-A	Lab Control Sample	75	67 S1-
LCSD 880-71253/3-A	Lab Control Sample Dup	74	80
LCSD 880-71254/3-A	Lab Control Sample Dup	80	79
MB 880-71253/1-A	Method Blank	102	112
MB 880-71254/1-A	Method Blank	119	102

Surrogate Legend

1CO = 1-Chlorooctane
 OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-71518/5-A
 Matrix: Solid
 Analysis Batch: 71762

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 71518

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 17:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 17:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 17:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/24/24 14:18	01/28/24 17:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/24/24 14:18	01/28/24 17:28	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/24/24 14:18	01/28/24 17:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130	01/24/24 14:18	01/28/24 17:28	1
1,4-Difluorobenzene (Surr)	132	S1+	70 - 130	01/24/24 14:18	01/28/24 17:28	1

Lab Sample ID: LCS 880-71518/1-A
 Matrix: Solid
 Analysis Batch: 71762

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 71518

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09202		mg/Kg		92	70 - 130
Toluene	0.100	0.08218		mg/Kg		82	70 - 130
Ethylbenzene	0.100	0.08502		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	0.200	0.1692		mg/Kg		85	70 - 130
o-Xylene	0.100	0.08738		mg/Kg		87	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: LCSD 880-71518/2-A
 Matrix: Solid
 Analysis Batch: 71762

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 71518

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.09900		mg/Kg		99	70 - 130	7	35
Toluene	0.100	0.08352		mg/Kg		84	70 - 130	2	35
Ethylbenzene	0.100	0.09734		mg/Kg		97	70 - 130	14	35
m-Xylene & p-Xylene	0.200	0.1942		mg/Kg		97	70 - 130	14	35
o-Xylene	0.100	0.1001		mg/Kg		100	70 - 130	14	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 890-5985-A-1-E MS
 Matrix: Solid
 Analysis Batch: 71762

Client Sample ID: Matrix Spike
 Prep Type: Total/NA
 Prep Batch: 71518

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0996	0.08502		mg/Kg		85	70 - 130
Toluene	<0.00199	U F1	0.0996	0.03703	F1	mg/Kg		37	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
SDG: 03C1558303

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

Lab Sample ID: 890-5985-A-1-E MS
Matrix: Solid
Analysis Batch: 71762

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 71518

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				
Ethylbenzene	<0.00199	U F1	0.0996	0.04714	F1	mg/Kg		47	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.008289	F1	mg/Kg		4	70 - 130
o-Xylene	<0.00199	U	0.0996	0.07619		mg/Kg		76	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 890-5985-A-1-F MSD
Matrix: Solid
Analysis Batch: 71762

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 71518

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Benzene	<0.00199	U	0.0990	0.09096		mg/Kg		92	70 - 130	7	35
Toluene	<0.00199	U F1	0.0990	0.04689	F1	mg/Kg		47	70 - 130	23	35
Ethylbenzene	<0.00199	U F1	0.0990	0.04753	F1	mg/Kg		48	70 - 130	1	35
m-Xylene & p-Xylene	<0.00398	U F1	0.198	0.007162	F1	mg/Kg		4	70 - 130	15	35
o-Xylene	<0.00199	U	0.0990	0.08386		mg/Kg		84	70 - 130	10	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: MB 880-71534/5-A
Matrix: Solid
Analysis Batch: 71765

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71534

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		01/24/24 15:28	01/29/24 11:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/24/24 15:28	01/29/24 11:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/24/24 15:28	01/29/24 11:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/24/24 15:28	01/29/24 11:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/24/24 15:28	01/29/24 11:45	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/24/24 15:28	01/29/24 11:45	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	59	S1-	70 - 130	01/24/24 15:28	01/29/24 11:45	1
1,4-Difluorobenzene (Surr)	104		70 - 130	01/24/24 15:28	01/29/24 11:45	1

Lab Sample ID: MB 880-71631/5-A
Matrix: Solid
Analysis Batch: 71765

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71631

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 01:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 01:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 01:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/25/24 17:57	01/30/24 01:23	1

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QC Sample Results

Client: Ensolum
Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
SDG: 03C1558303

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

Lab Sample ID: MB 880-71631/5-A
Matrix: Solid
Analysis Batch: 71765

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71631

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/24 17:57	01/30/24 01:23	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/25/24 17:57	01/30/24 01:23	1
Surrogate	MB MB		Limits	Unit	D	Prepared	Analyzed	Dil Fac
%Recovery	Qualifier							
4-Bromofluorobenzene (Surr)	51	S1-	70 - 130			01/25/24 17:57	01/30/24 01:23	1
1,4-Difluorobenzene (Surr)	104		70 - 130			01/25/24 17:57	01/30/24 01:23	1

Lab Sample ID: LCS 880-71631/1-A
Matrix: Solid
Analysis Batch: 71765

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71631

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	0.100	0.07668		mg/Kg		77	70 - 130
Toluene	0.100	0.07757		mg/Kg		78	70 - 130
Ethylbenzene	0.100	0.09609		mg/Kg		96	70 - 130
m-Xylene & p-Xylene	0.200	0.2014		mg/Kg		101	70 - 130
o-Xylene	0.100	0.09712		mg/Kg		97	70 - 130
Surrogate	LCS LCS		Limits	Unit	D	%Rec	%Rec Limits
%Recovery	Qualifier						
4-Bromofluorobenzene (Surr)	108		70 - 130				
1,4-Difluorobenzene (Surr)	98		70 - 130				

Lab Sample ID: LCSD 880-71631/2-A
Matrix: Solid
Analysis Batch: 71765

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 71631

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
Benzene	0.100	0.1022		mg/Kg		102	70 - 130	28	35
Toluene	0.100	0.09911		mg/Kg		99	70 - 130	24	35
Ethylbenzene	0.100	0.09579		mg/Kg		96	70 - 130	0	35
m-Xylene & p-Xylene	0.200	0.2690	*+	mg/Kg		134	70 - 130	29	35
o-Xylene	0.100	0.1194		mg/Kg		119	70 - 130	21	35
Surrogate	LCSD LCSD		Limits	Unit	D	%Rec	%Rec Limits	RPD	Limit
%Recovery	Qualifier								
4-Bromofluorobenzene (Surr)	119		70 - 130						
1,4-Difluorobenzene (Surr)	86		70 - 130						

Lab Sample ID: 890-5985-A-21-D MS
Matrix: Solid
Analysis Batch: 71765

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 71631

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Benzene	<0.00201	U F1	0.0996	0.05890	F1	mg/Kg		58	70 - 130
Toluene	<0.00201	U F1	0.0996	0.08444		mg/Kg		84	70 - 130
Ethylbenzene	<0.00201	U F1	0.0996	0.06648	F1	mg/Kg		67	70 - 130
m-Xylene & p-Xylene	<0.00402	U *+	0.199	0.1548		mg/Kg		78	70 - 130
o-Xylene	<0.00201	U F1	0.0996	0.07441		mg/Kg		74	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
SDG: 03C1558303

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

Lab Sample ID: 890-5985-A-21-D MS
Matrix: Solid
Analysis Batch: 71765

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 71631

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	123		70 - 130

Lab Sample ID: 890-5985-A-21-E MSD
Matrix: Solid
Analysis Batch: 71765

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 71631

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Benzene	<0.00201	U F1	0.0990	0.05135	F1	mg/Kg		51	70 - 130	14	35	
Toluene	<0.00201	U F1	0.0990	0.06206	F1	mg/Kg		62	70 - 130	31	35	
Ethylbenzene	<0.00201	U F1	0.0990	0.05619	F1	mg/Kg		57	70 - 130	17	35	
m-Xylene & p-Xylene	<0.00402	U *+	0.198	0.1392		mg/Kg		70	70 - 130	11	35	
o-Xylene	<0.00201	U F1	0.0990	0.06913	F1	mg/Kg		69	70 - 130	7	35	

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	88		70 - 130

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

Lab Sample ID: MB 880-71253/1-A
Matrix: Solid
Analysis Batch: 71758

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71253

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/19/24 17:09	01/28/24 08:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/19/24 17:09	01/28/24 08:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/19/24 17:09	01/28/24 08:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	01/19/24 17:09	01/28/24 08:03	1
o-Terphenyl	112		70 - 130	01/19/24 17:09	01/28/24 08:03	1

Lab Sample ID: LCS 880-71253/2-A
Matrix: Solid
Analysis Batch: 71758

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71253

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	RPD
Gasoline Range Organics (GRO)-C6-C10	1000	898.0		mg/Kg		90	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	833.6		mg/Kg		83	70 - 130	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	91		70 - 130

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QC Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

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

Lab Sample ID: LCSD 880-71253/3-A
Matrix: Solid
Analysis Batch: 71758

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 71253

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	1000	927.5		mg/Kg		93	70 - 130	3	20	
Diesel Range Organics (Over C10-C28)	1000	776.5		mg/Kg		78	70 - 130	7	20	
		LCSD	LCSD							
Surrogate		%Recovery	Qualifier	Limits						
1-Chlorooctane		74		70 - 130						
o-Terphenyl		80		70 - 130						

Lab Sample ID: 890-5986-1 MS
Matrix: Solid
Analysis Batch: 71758

Client Sample ID: PH 07
Prep Type: Total/NA
Prep Batch: 71253

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	1010	826.6		mg/Kg		80	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.6	U	1010	929.3		mg/Kg		92	70 - 130		
		MS	MS								
Surrogate		%Recovery	Qualifier	Limits							
1-Chlorooctane		91		70 - 130							
o-Terphenyl		82		70 - 130							

Lab Sample ID: 890-5986-1 MSD
Matrix: Solid
Analysis Batch: 71758

Client Sample ID: PH 07
Prep Type: Total/NA
Prep Batch: 71253

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	1010	929.1		mg/Kg		91	70 - 130	12	20
Diesel Range Organics (Over C10-C28)	<49.6	U	1010	1011		mg/Kg		100	70 - 130	8	20
		MSD	MSD								
Surrogate		%Recovery	Qualifier	Limits							
1-Chlorooctane		98		70 - 130							
o-Terphenyl		90		70 - 130							

Lab Sample ID: MB 880-71254/1-A
Matrix: Solid
Analysis Batch: 71766

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71254

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		01/19/24 17:22	01/29/24 07:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/19/24 17:22	01/29/24 07:57	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/19/24 17:22	01/29/24 07:57	1

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QC Sample Results

Client: Ensolum
Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
SDG: 03C1558303

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

Lab Sample ID: MB 880-71254/1-A
Matrix: Solid
Analysis Batch: 71766

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71254

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	119		70 - 130	01/19/24 17:22	01/29/24 07:57	1
o-Terphenyl	102		70 - 130	01/19/24 17:22	01/29/24 07:57	1

Lab Sample ID: LCS 880-71254/2-A
Matrix: Solid
Analysis Batch: 71766

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71254

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Gasoline Range Organics (GRO)-C6-C10	1000	1053		mg/Kg		105	70 - 130
Diesel Range Organics (Over C10-C28)	1000	776.6		mg/Kg		78	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	75		70 - 130
o-Terphenyl	67	S1-	70 - 130

Lab Sample ID: LCSD 880-71254/3-A
Matrix: Solid
Analysis Batch: 71766

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 71254

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	1000	1008		mg/Kg		101	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	1000	778.1		mg/Kg		78	70 - 130	0	20

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	80		70 - 130
o-Terphenyl	79		70 - 130

Lab Sample ID: 890-5986-21 MS
Matrix: Solid
Analysis Batch: 71766

Client Sample ID: PH 14A
Prep Type: Total/NA
Prep Batch: 71254

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Gasoline Range Organics (GRO)-C6-C10	<50.1	U F2	1010	1295		mg/Kg		126	70 - 130
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	1023		mg/Kg		97	70 - 130

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	114		70 - 130
o-Terphenyl	84		70 - 130

QC Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

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

Lab Sample ID: 890-5986-21 MSD
 Matrix: Solid
 Analysis Batch: 71766

Client Sample ID: PH 14A
 Prep Type: Total/NA
 Prep Batch: 71254

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 F2	1010	938.9	F2	mg/Kg		90	70 - 130	32	20
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	1091		mg/Kg		104	70 - 130	6	20
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
1-Chlorooctane	122		70 - 130								
o-Terphenyl	89		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71226/1-A
 Matrix: Solid
 Analysis Batch: 71387

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			01/24/24 12:16	1

Lab Sample ID: LCS 880-71226/2-A
 Matrix: Solid
 Analysis Batch: 71387

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	238.3		mg/Kg		95	90 - 110

Lab Sample ID: LCSD 880-71226/3-A
 Matrix: Solid
 Analysis Batch: 71387

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	241.1		mg/Kg		96	90 - 110	1	20

Lab Sample ID: 890-5986-4 MS
 Matrix: Solid
 Analysis Batch: 71387

Client Sample ID: PH 08
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2270		1250	3543		mg/Kg		101	90 - 110

Lab Sample ID: 890-5986-4 MSD
 Matrix: Solid
 Analysis Batch: 71387

Client Sample ID: PH 08
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2270		1250	3557		mg/Kg		103	90 - 110	0	20

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QC Sample Results

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-71228/1-A
 Matrix: Solid
 Analysis Batch: 71388

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			01/24/24 11:07	1

Lab Sample ID: LCS 880-71228/2-A
 Matrix: Solid
 Analysis Batch: 71388

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	264.6		mg/Kg		106	90 - 110

Lab Sample ID: LCSD 880-71228/3-A
 Matrix: Solid
 Analysis Batch: 71388

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	263.9		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 890-5986-14 MS
 Matrix: Solid
 Analysis Batch: 71388

Client Sample ID: PH 11B
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	12.3		253	281.8		mg/Kg		107	90 - 110

Lab Sample ID: 890-5986-14 MSD
 Matrix: Solid
 Analysis Batch: 71388

Client Sample ID: PH 11B
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	12.3		253	281.2		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 890-5986-24 MS
 Matrix: Solid
 Analysis Batch: 71388

Client Sample ID: PH 15A
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2500	F1	2520	5354	F1	mg/Kg		113	90 - 110

Lab Sample ID: 890-5986-24 MSD
 Matrix: Solid
 Analysis Batch: 71388

Client Sample ID: PH 15A
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2500	F1	2520	5358	F1	mg/Kg		113	90 - 110	0	20

QC Association Summary

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

GC VOA

Prep Batch: 71518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-1	PH 07	Total/NA	Solid	5035	
890-5986-2	PH 07A	Total/NA	Solid	5035	
890-5986-3	PH 07B	Total/NA	Solid	5035	
890-5986-4	PH 08	Total/NA	Solid	5035	
890-5986-5	PH 08A	Total/NA	Solid	5035	
890-5986-6	PH 08B	Total/NA	Solid	5035	
890-5986-7	PH 09	Total/NA	Solid	5035	
890-5986-8	PH 09A	Total/NA	Solid	5035	
890-5986-9	PH 10	Total/NA	Solid	5035	
890-5986-10	PH 10A	Total/NA	Solid	5035	
890-5986-11	PH 10B	Total/NA	Solid	5035	
MB 880-71518/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-71518/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-71518/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5985-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-5985-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 71534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-71534/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 71631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-12	PH 11	Total/NA	Solid	5035	
890-5986-13	PH 11A	Total/NA	Solid	5035	
890-5986-14	PH 11B	Total/NA	Solid	5035	
890-5986-15	PH 12	Total/NA	Solid	5035	
890-5986-16	PH 12A	Total/NA	Solid	5035	
890-5986-17	PH 12B	Total/NA	Solid	5035	
890-5986-18	PH 13	Total/NA	Solid	5035	
890-5986-19	PH 13A	Total/NA	Solid	5035	
890-5986-20	PH 14	Total/NA	Solid	5035	
890-5986-21	PH 14A	Total/NA	Solid	5035	
890-5986-22	PH 14B	Total/NA	Solid	5035	
890-5986-23	PH 15	Total/NA	Solid	5035	
890-5986-24	PH 15A	Total/NA	Solid	5035	
890-5986-25	PH 15B	Total/NA	Solid	5035	
890-5986-26	PH 16	Total/NA	Solid	5035	
890-5986-27	PH 16A	Total/NA	Solid	5035	
890-5986-28	PH 16B	Total/NA	Solid	5035	
890-5986-29	PH 17	Total/NA	Solid	5035	
890-5986-30	PH 17A	Total/NA	Solid	5035	
MB 880-71631/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-71631/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-71631/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5985-A-21-D MS	Matrix Spike	Total/NA	Solid	5035	
890-5985-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 71762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-1	PH 07	Total/NA	Solid	8021B	71518

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QC Association Summary

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

GC VOA (Continued)

Analysis Batch: 71762 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-2	PH 07A	Total/NA	Solid	8021B	71518
890-5986-3	PH 07B	Total/NA	Solid	8021B	71518
890-5986-4	PH 08	Total/NA	Solid	8021B	71518
890-5986-5	PH 08A	Total/NA	Solid	8021B	71518
890-5986-6	PH 08B	Total/NA	Solid	8021B	71518
890-5986-7	PH 09	Total/NA	Solid	8021B	71518
890-5986-8	PH 09A	Total/NA	Solid	8021B	71518
890-5986-9	PH 10	Total/NA	Solid	8021B	71518
890-5986-10	PH 10A	Total/NA	Solid	8021B	71518
890-5986-11	PH 10B	Total/NA	Solid	8021B	71518
MB 880-71518/5-A	Method Blank	Total/NA	Solid	8021B	71518
LCS 880-71518/1-A	Lab Control Sample	Total/NA	Solid	8021B	71518
LCS D 880-71518/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71518
890-5985-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	71518
890-5985-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	71518

Analysis Batch: 71765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-12	PH 11	Total/NA	Solid	8021B	71631
890-5986-13	PH 11A	Total/NA	Solid	8021B	71631
890-5986-14	PH 11B	Total/NA	Solid	8021B	71631
890-5986-15	PH 12	Total/NA	Solid	8021B	71631
890-5986-16	PH 12A	Total/NA	Solid	8021B	71631
890-5986-17	PH 12B	Total/NA	Solid	8021B	71631
890-5986-18	PH 13	Total/NA	Solid	8021B	71631
890-5986-19	PH 13A	Total/NA	Solid	8021B	71631
890-5986-20	PH 14	Total/NA	Solid	8021B	71631
890-5986-21	PH 14A	Total/NA	Solid	8021B	71631
890-5986-22	PH 14B	Total/NA	Solid	8021B	71631
890-5986-23	PH 15	Total/NA	Solid	8021B	71631
890-5986-24	PH 15A	Total/NA	Solid	8021B	71631
890-5986-25	PH 15B	Total/NA	Solid	8021B	71631
890-5986-26	PH 16	Total/NA	Solid	8021B	71631
890-5986-27	PH 16A	Total/NA	Solid	8021B	71631
890-5986-28	PH 16B	Total/NA	Solid	8021B	71631
890-5986-29	PH 17	Total/NA	Solid	8021B	71631
890-5986-30	PH 17A	Total/NA	Solid	8021B	71631
MB 880-71534/5-A	Method Blank	Total/NA	Solid	8021B	71534
MB 880-71631/5-A	Method Blank	Total/NA	Solid	8021B	71631
LCS 880-71631/1-A	Lab Control Sample	Total/NA	Solid	8021B	71631
LCS D 880-71631/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71631
890-5985-A-21-D MS	Matrix Spike	Total/NA	Solid	8021B	71631
890-5985-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	71631

Analysis Batch: 71820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-1	PH 07	Total/NA	Solid	Total BTEX	
890-5986-2	PH 07A	Total/NA	Solid	Total BTEX	
890-5986-3	PH 07B	Total/NA	Solid	Total BTEX	
890-5986-4	PH 08	Total/NA	Solid	Total BTEX	
890-5986-5	PH 08A	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

GC VOA (Continued)

Analysis Batch: 71820 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-6	PH 08B	Total/NA	Solid	Total BTEX	
890-5986-7	PH 09	Total/NA	Solid	Total BTEX	
890-5986-8	PH 09A	Total/NA	Solid	Total BTEX	
890-5986-9	PH 10	Total/NA	Solid	Total BTEX	
890-5986-10	PH 10A	Total/NA	Solid	Total BTEX	
890-5986-11	PH 10B	Total/NA	Solid	Total BTEX	
890-5986-12	PH 11	Total/NA	Solid	Total BTEX	
890-5986-13	PH 11A	Total/NA	Solid	Total BTEX	
890-5986-14	PH 11B	Total/NA	Solid	Total BTEX	
890-5986-15	PH 12	Total/NA	Solid	Total BTEX	
890-5986-16	PH 12A	Total/NA	Solid	Total BTEX	
890-5986-17	PH 12B	Total/NA	Solid	Total BTEX	
890-5986-18	PH 13	Total/NA	Solid	Total BTEX	
890-5986-19	PH 13A	Total/NA	Solid	Total BTEX	
890-5986-20	PH 14	Total/NA	Solid	Total BTEX	
890-5986-21	PH 14A	Total/NA	Solid	Total BTEX	
890-5986-22	PH 14B	Total/NA	Solid	Total BTEX	
890-5986-23	PH 15	Total/NA	Solid	Total BTEX	
890-5986-24	PH 15A	Total/NA	Solid	Total BTEX	
890-5986-25	PH 15B	Total/NA	Solid	Total BTEX	
890-5986-26	PH 16	Total/NA	Solid	Total BTEX	
890-5986-27	PH 16A	Total/NA	Solid	Total BTEX	
890-5986-28	PH 16B	Total/NA	Solid	Total BTEX	
890-5986-29	PH 17	Total/NA	Solid	Total BTEX	
890-5986-30	PH 17A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 71253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-1	PH 07	Total/NA	Solid	8015NM Prep	
890-5986-2	PH 07A	Total/NA	Solid	8015NM Prep	
890-5986-3	PH 07B	Total/NA	Solid	8015NM Prep	
890-5986-4	PH 08	Total/NA	Solid	8015NM Prep	
890-5986-5	PH 08A	Total/NA	Solid	8015NM Prep	
890-5986-6	PH 08B	Total/NA	Solid	8015NM Prep	
890-5986-7	PH 09	Total/NA	Solid	8015NM Prep	
890-5986-8	PH 09A	Total/NA	Solid	8015NM Prep	
890-5986-9	PH 10	Total/NA	Solid	8015NM Prep	
890-5986-10	PH 10A	Total/NA	Solid	8015NM Prep	
890-5986-11	PH 10B	Total/NA	Solid	8015NM Prep	
890-5986-12	PH 11	Total/NA	Solid	8015NM Prep	
890-5986-13	PH 11A	Total/NA	Solid	8015NM Prep	
890-5986-14	PH 11B	Total/NA	Solid	8015NM Prep	
890-5986-15	PH 12	Total/NA	Solid	8015NM Prep	
890-5986-16	PH 12A	Total/NA	Solid	8015NM Prep	
890-5986-17	PH 12B	Total/NA	Solid	8015NM Prep	
890-5986-18	PH 13	Total/NA	Solid	8015NM Prep	
890-5986-19	PH 13A	Total/NA	Solid	8015NM Prep	
890-5986-20	PH 14	Total/NA	Solid	8015NM Prep	
MB 880-71253/1-A	Method Blank	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

GC Semi VOA (Continued)

Prep Batch: 71253 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-71253/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCS 880-71253/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5986-1 MS	PH 07	Total/NA	Solid	8015NM Prep	
890-5986-1 MSD	PH 07	Total/NA	Solid	8015NM Prep	

Prep Batch: 71254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-21	PH 14A	Total/NA	Solid	8015NM Prep	
890-5986-22	PH 14B	Total/NA	Solid	8015NM Prep	
890-5986-23	PH 15	Total/NA	Solid	8015NM Prep	
890-5986-24	PH 15A	Total/NA	Solid	8015NM Prep	
890-5986-25	PH 15B	Total/NA	Solid	8015NM Prep	
890-5986-26	PH 16	Total/NA	Solid	8015NM Prep	
890-5986-27	PH 16A	Total/NA	Solid	8015NM Prep	
890-5986-28	PH 16B	Total/NA	Solid	8015NM Prep	
890-5986-29	PH 17	Total/NA	Solid	8015NM Prep	
890-5986-30	PH 17A	Total/NA	Solid	8015NM Prep	
MB 880-71254/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-71254/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCS 880-71254/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5986-21 MS	PH 14A	Total/NA	Solid	8015NM Prep	
890-5986-21 MSD	PH 14A	Total/NA	Solid	8015NM Prep	

Analysis Batch: 71758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-1	PH 07	Total/NA	Solid	8015B NM	71253
890-5986-2	PH 07A	Total/NA	Solid	8015B NM	71253
890-5986-3	PH 07B	Total/NA	Solid	8015B NM	71253
890-5986-4	PH 08	Total/NA	Solid	8015B NM	71253
890-5986-5	PH 08A	Total/NA	Solid	8015B NM	71253
890-5986-6	PH 08B	Total/NA	Solid	8015B NM	71253
890-5986-7	PH 09	Total/NA	Solid	8015B NM	71253
890-5986-8	PH 09A	Total/NA	Solid	8015B NM	71253
890-5986-9	PH 10	Total/NA	Solid	8015B NM	71253
890-5986-10	PH 10A	Total/NA	Solid	8015B NM	71253
890-5986-11	PH 10B	Total/NA	Solid	8015B NM	71253
890-5986-12	PH 11	Total/NA	Solid	8015B NM	71253
890-5986-13	PH 11A	Total/NA	Solid	8015B NM	71253
890-5986-14	PH 11B	Total/NA	Solid	8015B NM	71253
890-5986-15	PH 12	Total/NA	Solid	8015B NM	71253
890-5986-16	PH 12A	Total/NA	Solid	8015B NM	71253
890-5986-17	PH 12B	Total/NA	Solid	8015B NM	71253
890-5986-18	PH 13	Total/NA	Solid	8015B NM	71253
890-5986-19	PH 13A	Total/NA	Solid	8015B NM	71253
890-5986-20	PH 14	Total/NA	Solid	8015B NM	71253
MB 880-71253/1-A	Method Blank	Total/NA	Solid	8015B NM	71253
LCS 880-71253/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	71253
LCS 880-71253/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	71253
890-5986-1 MS	PH 07	Total/NA	Solid	8015B NM	71253
890-5986-1 MSD	PH 07	Total/NA	Solid	8015B NM	71253

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QC Association Summary

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

GC Semi VOA

Analysis Batch: 71766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-21	PH 14A	Total/NA	Solid	8015B NM	71254
890-5986-22	PH 14B	Total/NA	Solid	8015B NM	71254
890-5986-23	PH 15	Total/NA	Solid	8015B NM	71254
890-5986-24	PH 15A	Total/NA	Solid	8015B NM	71254
890-5986-25	PH 15B	Total/NA	Solid	8015B NM	71254
890-5986-26	PH 16	Total/NA	Solid	8015B NM	71254
890-5986-27	PH 16A	Total/NA	Solid	8015B NM	71254
890-5986-28	PH 16B	Total/NA	Solid	8015B NM	71254
890-5986-29	PH 17	Total/NA	Solid	8015B NM	71254
890-5986-30	PH 17A	Total/NA	Solid	8015B NM	71254
MB 880-71254/1-A	Method Blank	Total/NA	Solid	8015B NM	71254
LCS 880-71254/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	71254
LCSD 880-71254/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	71254
890-5986-21 MS	PH 14A	Total/NA	Solid	8015B NM	71254
890-5986-21 MSD	PH 14A	Total/NA	Solid	8015B NM	71254

Analysis Batch: 71895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-1	PH 07	Total/NA	Solid	8015 NM	
890-5986-2	PH 07A	Total/NA	Solid	8015 NM	
890-5986-3	PH 07B	Total/NA	Solid	8015 NM	
890-5986-4	PH 08	Total/NA	Solid	8015 NM	
890-5986-5	PH 08A	Total/NA	Solid	8015 NM	
890-5986-6	PH 08B	Total/NA	Solid	8015 NM	
890-5986-7	PH 09	Total/NA	Solid	8015 NM	
890-5986-8	PH 09A	Total/NA	Solid	8015 NM	
890-5986-9	PH 10	Total/NA	Solid	8015 NM	
890-5986-10	PH 10A	Total/NA	Solid	8015 NM	
890-5986-11	PH 10B	Total/NA	Solid	8015 NM	
890-5986-12	PH 11	Total/NA	Solid	8015 NM	
890-5986-13	PH 11A	Total/NA	Solid	8015 NM	
890-5986-14	PH 11B	Total/NA	Solid	8015 NM	
890-5986-15	PH 12	Total/NA	Solid	8015 NM	
890-5986-16	PH 12A	Total/NA	Solid	8015 NM	
890-5986-17	PH 12B	Total/NA	Solid	8015 NM	
890-5986-18	PH 13	Total/NA	Solid	8015 NM	
890-5986-19	PH 13A	Total/NA	Solid	8015 NM	
890-5986-20	PH 14	Total/NA	Solid	8015 NM	
890-5986-21	PH 14A	Total/NA	Solid	8015 NM	
890-5986-22	PH 14B	Total/NA	Solid	8015 NM	
890-5986-23	PH 15	Total/NA	Solid	8015 NM	
890-5986-24	PH 15A	Total/NA	Solid	8015 NM	
890-5986-25	PH 15B	Total/NA	Solid	8015 NM	
890-5986-26	PH 16	Total/NA	Solid	8015 NM	
890-5986-27	PH 16A	Total/NA	Solid	8015 NM	
890-5986-28	PH 16B	Total/NA	Solid	8015 NM	
890-5986-29	PH 17	Total/NA	Solid	8015 NM	
890-5986-30	PH 17A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

HPLC/IC

Leach Batch: 71226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-1	PH 07	Soluble	Solid	DI Leach	
890-5986-2	PH 07A	Soluble	Solid	DI Leach	
890-5986-3	PH 07B	Soluble	Solid	DI Leach	
890-5986-4	PH 08	Soluble	Solid	DI Leach	
890-5986-5	PH 08A	Soluble	Solid	DI Leach	
890-5986-6	PH 08B	Soluble	Solid	DI Leach	
890-5986-7	PH 09	Soluble	Solid	DI Leach	
890-5986-8	PH 09A	Soluble	Solid	DI Leach	
890-5986-9	PH 10	Soluble	Solid	DI Leach	
890-5986-10	PH 10A	Soluble	Solid	DI Leach	
890-5986-11	PH 10B	Soluble	Solid	DI Leach	
890-5986-12	PH 11	Soluble	Solid	DI Leach	
890-5986-13	PH 11A	Soluble	Solid	DI Leach	
MB 880-71226/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71226/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71226/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5986-4 MS	PH 08	Soluble	Solid	DI Leach	
890-5986-4 MSD	PH 08	Soluble	Solid	DI Leach	

Leach Batch: 71228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-14	PH 11B	Soluble	Solid	DI Leach	
890-5986-15	PH 12	Soluble	Solid	DI Leach	
890-5986-16	PH 12A	Soluble	Solid	DI Leach	
890-5986-17	PH 12B	Soluble	Solid	DI Leach	
890-5986-18	PH 13	Soluble	Solid	DI Leach	
890-5986-19	PH 13A	Soluble	Solid	DI Leach	
890-5986-20	PH 14	Soluble	Solid	DI Leach	
890-5986-21	PH 14A	Soluble	Solid	DI Leach	
890-5986-22	PH 14B	Soluble	Solid	DI Leach	
890-5986-23	PH 15	Soluble	Solid	DI Leach	
890-5986-24	PH 15A	Soluble	Solid	DI Leach	
890-5986-25	PH 15B	Soluble	Solid	DI Leach	
890-5986-26	PH 16	Soluble	Solid	DI Leach	
890-5986-27	PH 16A	Soluble	Solid	DI Leach	
890-5986-28	PH 16B	Soluble	Solid	DI Leach	
890-5986-29	PH 17	Soluble	Solid	DI Leach	
890-5986-30	PH 17A	Soluble	Solid	DI Leach	
MB 880-71228/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71228/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71228/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5986-14 MS	PH 11B	Soluble	Solid	DI Leach	
890-5986-14 MSD	PH 11B	Soluble	Solid	DI Leach	
890-5986-24 MS	PH 15A	Soluble	Solid	DI Leach	
890-5986-24 MSD	PH 15A	Soluble	Solid	DI Leach	

Analysis Batch: 71387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-1	PH 07	Soluble	Solid	300.0	71226
890-5986-2	PH 07A	Soluble	Solid	300.0	71226
890-5986-3	PH 07B	Soluble	Solid	300.0	71226

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QC Association Summary

Client: Ensolum
Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
SDG: 03C1558303

HPLC/IC (Continued)

Analysis Batch: 71387 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-4	PH 08	Soluble	Solid	300.0	71226
890-5986-5	PH 08A	Soluble	Solid	300.0	71226
890-5986-6	PH 08B	Soluble	Solid	300.0	71226
890-5986-7	PH 09	Soluble	Solid	300.0	71226
890-5986-8	PH 09A	Soluble	Solid	300.0	71226
890-5986-9	PH 10	Soluble	Solid	300.0	71226
890-5986-10	PH 10A	Soluble	Solid	300.0	71226
890-5986-11	PH 10B	Soluble	Solid	300.0	71226
890-5986-12	PH 11	Soluble	Solid	300.0	71226
890-5986-13	PH 11A	Soluble	Solid	300.0	71226
MB 880-71226/1-A	Method Blank	Soluble	Solid	300.0	71226
LCS 880-71226/2-A	Lab Control Sample	Soluble	Solid	300.0	71226
LCSD 880-71226/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71226
890-5986-4 MS	PH 08	Soluble	Solid	300.0	71226
890-5986-4 MSD	PH 08	Soluble	Solid	300.0	71226

Analysis Batch: 71388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5986-14	PH 11B	Soluble	Solid	300.0	71228
890-5986-15	PH 12	Soluble	Solid	300.0	71228
890-5986-16	PH 12A	Soluble	Solid	300.0	71228
890-5986-17	PH 12B	Soluble	Solid	300.0	71228
890-5986-18	PH 13	Soluble	Solid	300.0	71228
890-5986-19	PH 13A	Soluble	Solid	300.0	71228
890-5986-20	PH 14	Soluble	Solid	300.0	71228
890-5986-21	PH 14A	Soluble	Solid	300.0	71228
890-5986-22	PH 14B	Soluble	Solid	300.0	71228
890-5986-23	PH 15	Soluble	Solid	300.0	71228
890-5986-24	PH 15A	Soluble	Solid	300.0	71228
890-5986-25	PH 15B	Soluble	Solid	300.0	71228
890-5986-26	PH 16	Soluble	Solid	300.0	71228
890-5986-27	PH 16A	Soluble	Solid	300.0	71228
890-5986-28	PH 16B	Soluble	Solid	300.0	71228
890-5986-29	PH 17	Soluble	Solid	300.0	71228
890-5986-30	PH 17A	Soluble	Solid	300.0	71228
MB 880-71228/1-A	Method Blank	Soluble	Solid	300.0	71228
LCS 880-71228/2-A	Lab Control Sample	Soluble	Solid	300.0	71228
LCSD 880-71228/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71228
890-5986-14 MS	PH 11B	Soluble	Solid	300.0	71228
890-5986-14 MSD	PH 11B	Soluble	Solid	300.0	71228
890-5986-24 MS	PH 15A	Soluble	Solid	300.0	71228
890-5986-24 MSD	PH 15A	Soluble	Solid	300.0	71228

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Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 07
 Date Collected: 01/16/24 09:40
 Date Received: 01/18/24 08:12

Lab Sample ID: 890-5986-1
 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			5.02 g	5 mL	71518	01/24/24 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/28/24 18:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/28/24 18:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 10:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 10:51	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71387	01/24/24 13:28	SMC	EET MID

Client Sample ID: PH 07A
 Date Collected: 01/16/24 09:45
 Date Received: 01/18/24 08:12

Lab Sample ID: 890-5986-2
 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			4.99 g	5 mL	71518	01/24/24 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/28/24 19:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/28/24 19:18	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 11:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 11:59	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71387	01/24/24 13:34	SMC	EET MID

Client Sample ID: PH 07B
 Date Collected: 01/16/24 10:05
 Date Received: 01/18/24 08:12

Lab Sample ID: 890-5986-3
 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			4.98 g	5 mL	71518	01/24/24 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/28/24 19:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/28/24 19:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 12:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 12:20	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71387	01/24/24 13:39	SMC	EET MID

Client Sample ID: PH 08
 Date Collected: 01/16/24 10:35
 Date Received: 01/18/24 08:12

Lab Sample ID: 890-5986-4
 Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	71518	01/24/24 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/28/24 19:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/28/24 19:59	SM	EET MID

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Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 08

Lab Sample ID: 890-5986-4

Date Collected: 01/16/24 10:35

Matrix: Solid

Date Received: 01/18/24 08:12

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			71895	01/28/24 12:43	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 12:43	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71387	01/24/24 13:44	SMC	EET MID

Client Sample ID: PH 08A

Lab Sample ID: 890-5986-5

Date Collected: 01/16/24 10:45

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	71518	01/24/24 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/28/24 20:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/28/24 20:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 13:05	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 13:05	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71387	01/24/24 13:59	SMC	EET MID

Client Sample ID: PH 08B

Lab Sample ID: 890-5986-6

Date Collected: 01/16/24 11:00

Matrix: Solid

Date Received: 01/18/24 08:12

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	71518	01/24/24 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/28/24 20:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/28/24 20:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 13:29	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 13:29	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71387	01/24/24 14:04	SMC	EET MID

Client Sample ID: PH 09

Lab Sample ID: 890-5986-7

Date Collected: 01/17/24 15:05

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	71518	01/24/24 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/28/24 21:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/28/24 21:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 13:51	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 13:51	SM	EET MID

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Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 09

Lab Sample ID: 890-5986-7

Date Collected: 01/17/24 15:05

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71387	01/24/24 14:20	SMC	EET MID

Client Sample ID: PH 09A

Lab Sample ID: 890-5986-8

Date Collected: 01/17/24 15:10

Matrix: Solid

Date Received: 01/18/24 08:12

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	71518	01/24/24 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/28/24 22:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/28/24 22:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 14:13	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 14:13	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71387	01/24/24 14:25	SMC	EET MID

Client Sample ID: PH 10

Lab Sample ID: 890-5986-9

Date Collected: 01/16/24 12:30

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	71518	01/24/24 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/28/24 23:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/28/24 23:11	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 14:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 14:35	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71387	01/24/24 14:30	SMC	EET MID

Client Sample ID: PH 10A

Lab Sample ID: 890-5986-10

Date Collected: 01/16/24 12:50

Matrix: Solid

Date Received: 01/18/24 08:12

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	71518	01/24/24 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/28/24 23:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/28/24 23:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 14:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 14:57	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71387	01/24/24 14:35	SMC	EET MID

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Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 10B

Lab Sample ID: 890-5986-11

Date Collected: 01/16/24 13:10

Matrix: Solid

Date Received: 01/18/24 08:12

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	71518	01/24/24 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71762	01/28/24 23:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/28/24 23:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 15:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 15:41	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71387	01/24/24 14:40	SMC	EET MID

Client Sample ID: PH 11

Lab Sample ID: 890-5986-12

Date Collected: 01/17/24 13:40

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 02:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 02:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 16:02	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 16:02	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71387	01/24/24 14:45	SMC	EET MID

Client Sample ID: PH 11A

Lab Sample ID: 890-5986-13

Date Collected: 01/17/24 13:50

Matrix: Solid

Date Received: 01/18/24 08:12

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	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 02:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 02:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 16:26	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 16:26	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	71226	01/19/24 14:44	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71387	01/24/24 14:51	SMC	EET MID

Client Sample ID: PH 11B

Lab Sample ID: 890-5986-14

Date Collected: 01/17/24 14:00

Matrix: Solid

Date Received: 01/18/24 08:12

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	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 03:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 03:07	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 11B

Lab Sample ID: 890-5986-14

Date Collected: 01/17/24 14:00

Matrix: Solid

Date Received: 01/18/24 08:12

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			71895	01/28/24 16:46	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 16:46	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71388	01/24/24 11:28	SMC	EET MID

Client Sample ID: PH 12

Lab Sample ID: 890-5986-15

Date Collected: 01/17/24 13:10

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 03:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 03:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 17:07	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 17:07	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71388	01/24/24 11:48	SMC	EET MID

Client Sample ID: PH 12A

Lab Sample ID: 890-5986-16

Date Collected: 01/17/24 13:30

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 03:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 03:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 17:28	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 17:28	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	71388	01/24/24 14:40	SMC	EET MID

Client Sample ID: PH 12B

Lab Sample ID: 890-5986-17

Date Collected: 01/17/24 13:35

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 04:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 04:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 17:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 17:49	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 12B

Lab Sample ID: 890-5986-17

Date Collected: 01/17/24 13:35

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71388	01/24/24 14:46	SMC	EET MID

Client Sample ID: PH 13

Lab Sample ID: 890-5986-18

Date Collected: 01/17/24 13:00

Matrix: Solid

Date Received: 01/18/24 08:12

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	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 04:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 04:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 18:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 18:10	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71388	01/24/24 14:53	SMC	EET MID

Client Sample ID: PH 13A

Lab Sample ID: 890-5986-19

Date Collected: 01/17/24 13:05

Matrix: Solid

Date Received: 01/18/24 08:12

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	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 05:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 05:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 18:31	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 18:31	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71388	01/24/24 15:14	SMC	EET MID

Client Sample ID: PH 14

Lab Sample ID: 890-5986-20

Date Collected: 01/17/24 12:35

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 05:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 05:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/28/24 18:51	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	71253	01/19/24 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71758	01/28/24 18:51	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71388	01/24/24 15:21	SMC	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 14A

Lab Sample ID: 890-5986-21

Date Collected: 01/17/24 12:45

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 07:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 07:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/29/24 10:30	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	71254	01/19/24 17:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71766	01/29/24 10:30	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71388	01/24/24 15:28	SMC	EET MID

Client Sample ID: PH 14B

Lab Sample ID: 890-5986-22

Date Collected: 01/17/24 12:55

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 07:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 07:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/29/24 11:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	71254	01/19/24 17:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71766	01/29/24 11:35	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	71388	01/24/24 15:34	SMC	EET MID

Client Sample ID: PH 15

Lab Sample ID: 890-5986-23

Date Collected: 01/17/24 11:30

Matrix: Solid

Date Received: 01/18/24 08:12

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	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 08:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 08:19	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/29/24 11:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	71254	01/19/24 17:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71766	01/29/24 11:56	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71388	01/24/24 15:41	SMC	EET MID

Client Sample ID: PH 15A

Lab Sample ID: 890-5986-24

Date Collected: 01/17/24 11:50

Matrix: Solid

Date Received: 01/18/24 08:12

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	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 08:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 08:45	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 15A

Lab Sample ID: 890-5986-24

Date Collected: 01/17/24 11:50

Matrix: Solid

Date Received: 01/18/24 08:12

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			71895	01/29/24 12:18	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	71254	01/19/24 17:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71766	01/29/24 12:18	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71388	01/24/24 15:48	SMC	EET MID

Client Sample ID: PH 15B

Lab Sample ID: 890-5986-25

Date Collected: 01/17/24 12:00

Matrix: Solid

Date Received: 01/18/24 08:12

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	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 09:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 09:11	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/29/24 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	71254	01/19/24 17:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71766	01/29/24 12:40	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71388	01/24/24 16:09	SMC	EET MID

Client Sample ID: PH 16

Lab Sample ID: 890-5986-26

Date Collected: 01/17/24 12:05

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 09:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 09:37	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/29/24 13:01	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	71254	01/19/24 17:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71766	01/29/24 13:01	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71388	01/24/24 16:16	SMC	EET MID

Client Sample ID: PH 16A

Lab Sample ID: 890-5986-27

Date Collected: 01/17/24 12:25

Matrix: Solid

Date Received: 01/18/24 08:12

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	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 10:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 10:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/29/24 13:23	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	71254	01/19/24 17:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71766	01/29/24 13:23	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Client Sample ID: PH 16A

Lab Sample ID: 890-5986-27

Date Collected: 01/17/24 12:25

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71388	01/24/24 16:36	SMC	EET MID

Client Sample ID: PH 16B

Lab Sample ID: 890-5986-28

Date Collected: 01/17/24 12:30

Matrix: Solid

Date Received: 01/18/24 08:12

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	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 10:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 10:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/29/24 13:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	71254	01/19/24 17:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71766	01/29/24 13:45	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71388	01/24/24 16:43	SMC	EET MID

Client Sample ID: PH 17

Lab Sample ID: 890-5986-29

Date Collected: 01/17/24 14:25

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 10:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 10:56	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/29/24 14:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	71254	01/19/24 17:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71766	01/29/24 14:06	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71388	01/24/24 16:50	SMC	EET MID

Client Sample ID: PH 17A

Lab Sample ID: 890-5986-30

Date Collected: 01/17/24 14:40

Matrix: Solid

Date Received: 01/18/24 08:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	71631	01/25/24 17:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71765	01/30/24 11:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71820	01/30/24 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			71895	01/29/24 14:28	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	71254	01/19/24 17:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71766	01/29/24 14:28	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	71228	01/19/24 14:53	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71388	01/24/24 16:57	SMC	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
SDG: 03C1558303

Laboratory References:

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

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Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
SDG: 03C1558303

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	T104704400-23-26	06-30-24

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

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

- 1
- 2
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- 14

Method Summary

Client: Ensolum
Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
SDG: 03C1558303

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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



Sample Summary

Client: Ensolum
 Project/Site: PLU 17 TWIN WELLS RANCH 702H

Job ID: 890-5986-1
 SDG: 03C1558303

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5986-1	PH 07	Solid	01/16/24 09:40	01/18/24 08:12	0.5'
890-5986-2	PH 07A	Solid	01/16/24 09:45	01/18/24 08:12	1'
890-5986-3	PH 07B	Solid	01/16/24 10:05	01/18/24 08:12	6'
890-5986-4	PH 08	Solid	01/16/24 10:35	01/18/24 08:12	0.5'
890-5986-5	PH 08A	Solid	01/16/24 10:45	01/18/24 08:12	2'
890-5986-6	PH 08B	Solid	01/16/24 11:00	01/18/24 08:12	6'
890-5986-7	PH 09	Solid	01/17/24 15:05	01/18/24 08:12	0.5'
890-5986-8	PH 09A	Solid	01/17/24 15:10	01/18/24 08:12	1'
890-5986-9	PH 10	Solid	01/16/24 12:30	01/18/24 08:12	0.5'
890-5986-10	PH 10A	Solid	01/16/24 12:50	01/18/24 08:12	4'
890-5986-11	PH 10B	Solid	01/16/24 13:10	01/18/24 08:12	10'
890-5986-12	PH 11	Solid	01/17/24 13:40	01/18/24 08:12	0.5'
890-5986-13	PH 11A	Solid	01/17/24 13:50	01/18/24 08:12	2'
890-5986-14	PH 11B	Solid	01/17/24 14:00	01/18/24 08:12	4'
890-5986-15	PH 12	Solid	01/17/24 13:10	01/18/24 08:12	0.5'
890-5986-16	PH 12A	Solid	01/17/24 13:30	01/18/24 08:12	4'
890-5986-17	PH 12B	Solid	01/17/24 13:35	01/18/24 08:12	6'
890-5986-18	PH 13	Solid	01/17/24 13:00	01/18/24 08:12	0.5'
890-5986-19	PH 13A	Solid	01/17/24 13:05	01/18/24 08:12	1'0
890-5986-20	PH 14	Solid	01/17/24 12:35	01/18/24 08:12	0.5'
890-5986-21	PH 14A	Solid	01/17/24 12:45	01/18/24 08:12	2'
890-5986-22	PH 14B	Solid	01/17/24 12:55	01/18/24 08:12	4'
890-5986-23	PH 15	Solid	01/17/24 11:30	01/18/24 08:12	0.5'
890-5986-24	PH 15A	Solid	01/17/24 11:50	01/18/24 08:12	4'
890-5986-25	PH 15B	Solid	01/17/24 12:00	01/18/24 08:12	8'
890-5986-26	PH 16	Solid	01/17/24 12:05	01/18/24 08:12	0.5'
890-5986-27	PH 16A	Solid	01/17/24 12:25	01/18/24 08:12	4'
890-5986-28	PH 16B	Solid	01/17/24 12:30	01/18/24 08:12	6'
890-5986-29	PH 17	Solid	01/17/24 14:25	01/18/24 08:12	0.5'
890-5986-30	PH 17A	Solid	01/17/24 14:40	01/18/24 08:12	3'

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Loc: 890
5986

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 502-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 505-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Environment Testing
Xenco



890-5986 Chain of Custody

www.xenco.com Page 1 of 3

Program: PST/PST PBP Brownfields RRC Superfund

State of Project: Level II Level III PST/UST TRRP Level IV

Reporting: EDD ADAFT Other:

Project Manager: Ben Bellil
Company Name: Ensolvency, LLC
Address: 3122 National Parks Hwy
City, State ZIP: Carlsbad, NM 88220
Phone: 989-854-0852 Email: bbellil@ensolv.com

Bill to: (if different) Garrett Green
Company Name: XTO Energy
Address: 3104 E Greene St
City, State ZIP: Carlsbad, NM 88220
Email: bbellil@ensolv.com

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters		Preservative Codes
							TPH	Chlorides	
PH07	S	1/16/24	0940	0.5'	G	1	X	X	None: NO DI Water: H ₂ O
PH07A	S	1/16/24	0945	1'	G	1	X	X	Cool: Cool MeOH: Me
PH07B	S	1/16/24	1005	6'	G	1	X	X	HCL: HC HNO ₃ : HN
PH07C	S	1/16/24	1035	0.5'	G	1	X	X	H ₂ SO ₄ : H ₂
PH07D	S	1/16/24	1045	2'	G	1	X	X	H ₃ PO ₄ : HP
PH07E	S	1/16/24	1100	6'	G	1	X	X	NaHSO ₄ : NABIS
PH07F	S	1/16/24	1505	0.5'	G	1	X	X	Na ₂ S ₂ O ₃ : NaSO ₃
PH07G	S	1/16/24	1510	1'	G	1	X	X	Zn Acetate+NaOH: Zn
PH07H	S	1/16/24	1230	0.5'	G	1	X	X	NaOH+Ascorbic Acid: SAPC
PH07I	S	1/16/24	1250	4'	G	1	X	X	

Total 200.7/6010 200.8 / 6020: 8RCRA 13PPM Texas T1 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ 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
<i>Ben Bellil</i>	<i>Benny</i>	1/18 8/12			

Revised Date: 08/25/2020 Rev. 200.2



Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 502-0300
 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
 EL Paso, TX (915) 585-3643, Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Environment Testing
 Xenco



Work Order No: _____

www.xenco.com Page 2 of 3

Project Manager: Ben Belli
 Company Name: Enscium, LLC
 Address: 3122 Nat'l Parks Hwy
 City, State ZIP: Carlsbad, NM 88220
 Phone: 989-854-0852
 Email: bbelli@ensolum.com

Bill to: (if different) Garrett Greene
 Company Name: ~~Enscium, LLC~~ XTO Energy
 Address: 3104 E Greener St
 City, State ZIP: Carlsbad, NM 88220
 Email: bbelli@ensolum.com

Project Name: PLU17 TWIN WELLS RANCH Turn Around 7024
 Project Number: 03C1558303
 Project Location: 8322 2075th 703.806317
 Sampler's Name: Meredith Roberts
 PO #: _____

SAMPLE RECEIPT
 Samples Received Intact: Yes/No Yes No Thermometer ID: T1000
 Cooler Custody Seals: Yes/No N/A Correction Factor: 0.02
 Sample Custody Seals: Yes/No N/A Temperature Reading: 0.0
 Total Containers: _____ Corrected Temperature: 0.0

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	Preservative Codes
PH10B	S	1/16/24	1310	10'	G	1	X BTEX	None: NO DI Water: H ₂ O
PH11		1/17/24	1340	0.5'		1	X Chlorides	Cool: Cool MeOH: Me
PH11A			1350	2'		1		HCL: HC HNO ₃ : HN
PH11B			1400	4'		1		H ₂ SO ₄ : H ₂ NaOH: Na
PH12			1310	0.5'		1		H ₃ PO ₄ : HP
PH12A			1330	4'		1		NaHSO ₄ : NABIS
PH12B			1335	6'		1		Na ₂ S ₂ O ₅ : NaSO ₃
PH13			1300	0.5'		1		Zn Acetate+NaOH: Zn
PH13A			1305	1'		1		NaOH+Ascorbic Acid: SAPC
PH14			1335	0.5'		1		

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr 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 entered unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Ben Belli</i>	<i>Burns</i>	1/18 8:12

Revised Date: 09/25/2020 Rev. 2002



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

Environment Testing
 Xenco



Work Order No: _____

www.xenco.com Page 3 of 3

Project Manager: **Ben Beill**
 Company Name: **Ensolum, LLC**
 Address: **3122 National Parks Hwy**
 City, State ZIP: **Carlsbad, NM 88220**
 Phone: **989-854-0852**
 Email: **bbeill@ensolum.com**

Bill to: (if different)
 Company Name: **Garrett Green**
 Address: **XTO Energy**
 City, State ZIP: **Carlsbad, NM 88220**
 Email: **bbeill@ensolum.com**

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Comp	Parameters		Preservative Codes
							Yes	No	
PH14A	S	1/17/24	1245	2'	G	1	TPH		None: NO DI Water: H ₂ O Cool: Cool MeOH: Me HCL: HC HNO ₃ : HN H ₂ SO ₄ : H ₂ NaOH: Na H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC
PH14B			1255	4'			Chlorides		
PH15A			1130	0.5'			BTEX		
PH15B			1150	4'					
PH16A			1200	8'					
PH16B			1205	0.5'					
PH17A			1225	4'					
PH17A			1230	6'					
PH17A			1425	0.5'					
PH17A			1440	3'					

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mh 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 \$45.00 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)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	1/18/24		

Revised Date: 08/25/2023 Rev: 202.2



Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5986-1

SDG Number: 03C1558303

Login Number: 5986

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	

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5986-1

SDG Number: 03C1558303

Login Number: 5986

List Source: Eurofins Midland

List Number: 2

List Creation: 01/19/24 03:48 PM

Creator: Rodriguez, Leticia

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

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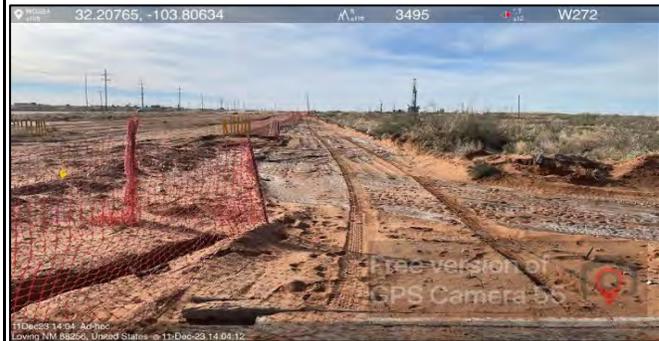


APPENDIX B

Photographic Log



Photographic Log
XTO Energy, Inc
PLU 17 Twin Wells Ranch 702H
Incident Number NAPP2335329764



Photograph: 1 Date: 12/11/2023
Description: Soil staining near release point.
View: Northwest

Photograph: 2 Date: 12/11/2023
Description: Soil staining along right-of-way.
View: West



Photograph: 3 Date: 4/5/2024
Description: Excavation activities
View: West

Photograph: 4 Date: 4/8/2024
Description: Excavation activities
View: East



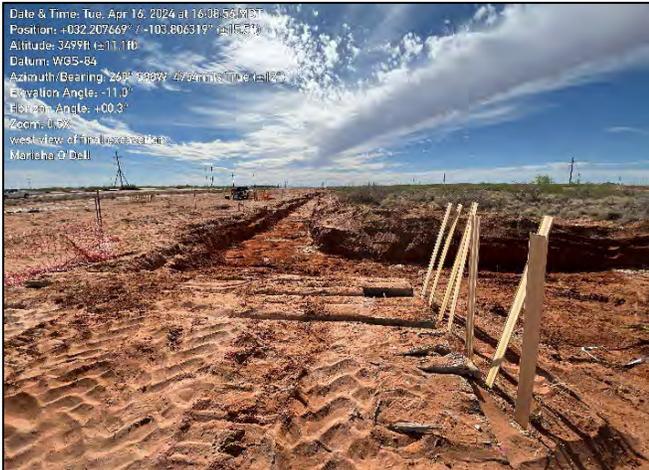
Photographic Log
XTO Energy, Inc
PLU 17 Twin Wells Ranch 702H
Incident Number NAPP2335329764



Photograph: 9 Date: 4/16/2024
Description: Final excavation
View: East



Photograph: 10 Date: 4/16/2024
Description: Final excavation
View: South



Photograph: 11 Date: 4/16/2024
Description: Final excavation
View: West



Photograph: 12 Date: 4/16/2024
Description: Final excavation
View: East



Photographic Log
XTO Energy, Inc
PLU 17 Twin Wells Ranch 702H
Incident Number NAPP2335329764



Photograph: 13 Date: 4/16/2024
Description: Final excavation
View: East

Photograph: 14 Date: 4/16/2024
Description: Final excavation
View: West



Photograph: 15 Date: 4/17/2024
Description: Backfill activities
View: East

Photograph: 16 Date: 4/18/2024
Description: Backfill activities
View: West



APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 15, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 17 TWIN WELLS RANCH 702H

Enclosed are the results of analyses for samples received by the laboratory on 04/10/24 16:24.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/08/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 01 4' (H241878-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.08	104	2.00	2.66	
Toluene*	<0.050	0.050	04/11/2024	ND	2.22	111	2.00	3.02	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.26	113	2.00	2.75	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.79	113	6.00	3.13	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/11/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	203	101	200	4.25	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	190	95.2	200	0.741	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 88.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.5 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/08/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 02 2' (H241878-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.08	104	2.00	2.66	
Toluene*	<0.050	0.050	04/11/2024	ND	2.22	111	2.00	3.02	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.26	113	2.00	2.75	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.79	113	6.00	3.13	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	203	101	200	4.25	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	190	95.2	200	0.741	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 83.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.7 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/08/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 03 1' (H241878-03)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.08	104	2.00	2.66		
Toluene*	<0.050	0.050	04/11/2024	ND	2.22	111	2.00	3.02		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.26	113	2.00	2.75		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.79	113	6.00	3.13		
Total BTEX	<0.300	0.300	04/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58		
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82		
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND						

Surrogate: 1-Chlorooctane 89.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.5 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/08/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 04 2' (H241878-04)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.08	104	2.00	2.66		
Toluene*	<0.050	0.050	04/11/2024	ND	2.22	111	2.00	3.02		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.26	113	2.00	2.75		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.79	113	6.00	3.13		
Total BTEX	<0.300	0.300	04/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58		
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82		
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND						

Surrogate: 1-Chlorooctane 85.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 72.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/08/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 06 4' (H241878-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.08	104	2.00	2.66	
Toluene*	<0.050	0.050	04/11/2024	ND	2.22	111	2.00	3.02	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.26	113	2.00	2.75	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.79	113	6.00	3.13	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 86.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.1 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/08/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 05 4' (H241878-06)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.08	104	2.00	2.66	
Toluene*	<0.050	0.050	04/11/2024	ND	2.22	111	2.00	3.02	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.26	113	2.00	2.75	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.79	113	6.00	3.13	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 96.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.9 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 07 2' (H241878-07)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.08	104	2.00	2.66	
Toluene*	<0.050	0.050	04/11/2024	ND	2.22	111	2.00	3.02	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.26	113	2.00	2.75	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.79	113	6.00	3.13	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 98.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 08 1' (H241878-08)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.08	104	2.00	2.66	
Toluene*	<0.050	0.050	04/11/2024	ND	2.22	111	2.00	3.02	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.26	113	2.00	2.75	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.79	113	6.00	3.13	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 92.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.5 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 09 1' (H241878-09)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77		
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54		
Total BTEX	<0.300	0.300	04/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58		
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82		
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND						

Surrogate: 1-Chlorooctane 94.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.8 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 10 4' (H241878-10)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2360	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 89.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.4 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 11 4' (H241878-11)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1150	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 82.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 70.6 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 12 4' (H241878-12)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 76.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 64.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 13 4' (H241878-13)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77		
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54		
Total BTEX	<0.300	0.300	04/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1340	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58		
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82		
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND						

Surrogate: 1-Chlorooctane 87.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 14 4' (H241878-14)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 88.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 15 0.5' (H241878-15)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 93.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 16 4' (H241878-16)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 89.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 01 0-4' (H241878-17)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 79.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 65.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 02 0-4' (H241878-18)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 88.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 03 0-4' (H241878-19)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 90.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 04 0-4' (H241878-20)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 79.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 66.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 05 0-4' (H241878-21)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	197	98.6	200	4.58	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	193	96.4	200	8.82	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 93.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 17 2' (H241878-22)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77		
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54		
Total BTEX	<0.300	0.300	04/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	197	98.6	200	4.58		
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	193	96.4	200	8.82		
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND						

Surrogate: 1-Chlorooctane 83.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 66.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 18 2' (H241878-23)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77		
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54		
Total BTEX	<0.300	0.300	04/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	190	95.2	200	0.117		
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	190	95.2	200	6.10		
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND						

Surrogate: 1-Chlorooctane 83.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 19 2' (H241878-24)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77		
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54		
Total BTEX	<0.300	0.300	04/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	190	95.2	200	0.117		
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	190	95.2	200	6.10		
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND						

Surrogate: 1-Chlorooctane 90.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 20 4' (H241878-25)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77		
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54		
Total BTEX	<0.300	0.300	04/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	928	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	190	95.2	200	0.117		
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	190	95.2	200	6.10		
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND						

Surrogate: 1-Chlorooctane 93.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/10/2024	Sampling Date:	04/10/2024
Reported:	04/15/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 06 0-2' (H241878-26)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.09	104	2.00	2.77	
Toluene*	<0.050	0.050	04/11/2024	ND	2.10	105	2.00	2.83	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.05	102	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	6.21	104	6.00	2.54	
Total BTEX	<0.300	0.300	04/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	190	95.2	200	0.117	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	190	95.2	200	6.10	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 94.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbes, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Ben Belli

Address: 3122 National Parks Hwy

City: Carlsbad State: NM Zip: 88220

Phone #: 989-954-0852 Fax #:

Project #: 03C1558303 Project Owner:

Project Name: PLU 17 TWIN WELLS RANCH 702H

Project Location: 32.2075W, -103.80437

Sampler Name: Mariaha O'Dell

P.O. #: **BILL TO**
Company: XTO Energy
Attn: Amy Ruth
Address: 3104 E. Greene St
City: Carlsbad
State: NM Zip: 88220
Phone #:
Fax #:

ANALYSIS REQUEST

Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV				SAMPLING
1	4'	C	1			X						4/8/24	13:40	X Chlorides
ES02	2'											4/8/24	13:25	X TPH
ES03	1'											4/8/24	13:55	X BTEX
ES04	2'											4/8/24	14:05	
ES06	4'											4/8/24	14:55	
ES05	4'											4/8/24	14:50	
ES07	2'											4/8/24	11:45	
ES08	1'											4/8/24	11:55	
ES09	1'											4/8/24	12:10	
ES10	4'											4/8/24	10:35	

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Relinquished By: [Signature] Date: 4/10/24 Time: 10:24

Received By: [Signature] Date: 4/10/24 Time: 10:24

Delivered By: (Circle One) Sampler - UPS - Bus - Other: Corrected Temp. °C: 4.40

Observed Temp. °C: 1.40 Sample Condition: Cool Intact [X] Yes [] No []

Checked By: [Signature] (Initials) []

Turnaround Time: Standard [X] Flush [] Bacteria (only) Sample Condition: Cool Intact [X] Yes [] No []

Remarks: Incident #: NAPP2335329704 Cost center: 2203371001 API: 30-015-41083



101 East Merland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolium, LLC
 Project Manager: Ben Belli
 Address: 3122 National Parks Hwy
 City: Carlsbad
 State: NM Zip: 88220
 Phone #: 989-854-0852 Fax #: 88220
 Project #: 0301558303 Project Owner:
 Project Name: PLU 17 Twin Wells Ranch 702H
 Project Location: 32-2075W-1-103-80037
 Sampler Name: Mariahna O'Dell
 P.O. #: Company: XTO Energy
 Attn: Amy Ruth
 Address: 3104 E. Green St
 City: Carlsbad
 State: NM Zip: 88220
 Phone #: Fax #:

Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
H241878	4'	C	1			X					4/10/24	10:40	X Chlorides
ES11	4'	C	1			X					4/10/24	10:45	X TPH
ES12	4'	C	1			X					4/10/24	12:15	X BTEX
ES13	4'	C	1			X					4/10/24	12:20	
ES14	4'	C	1			X					4/10/24	12:30	
ES15	0.5'	C	1			X					4/10/24	12:50	
ES16	4'	C	1			X					4/10/24	12:55	
SW01	0-4'	C	1			X					4/10/24		
SW02		C	1			X					4/10/24		
SW03		C	1			X					4/10/24		
SW04		C	1			X					4/10/24		

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Relinquished By: M. J. O'Dell
 Date: 4/10/24
 Received By: [Signature]
 Date: 4/10/24
 Time: 10:24

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other:
 Observed Temp. °C: 1.40
 Corrected Temp. °C: 4.40
 Sample Condition:
 Cool Intact: Yes No
 Checked By: [Signature]
 Turnaround Time: Standard
 Rush:
 Bacteria (only) Sample Condition:
 Cool Intact: Yes No
 Observed Temp. °C: 4.40
 Corrected Temp. °C: 4.40

† Cardinal cannot accept verbal changes. Please email changes to cely.kleene@cardinallabsnm.com



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Ben Beill

Address: 3122 National Parks Hwy

City: Carlisbad State: NM Zip: 88220

Phone #: 989-854-0852 Fax #:

Project #: 03C1558303 Project Owner:

Project Name: PLY 17 TWIN WELLS RANCH 102H

Project Location: 32.2075W, -103.90037

Sampler Name: Mariaha O'Dell

FOR LAB USE ONLY

Lab I.D. 1241878

Depth (feet)

(G)RAB OR (C)OMP.
CONTAINERS
GROUNDWATER
WASTEWATER
SOIL
OIL
SLUDGE
OTHER :
ACID/BASE:
(C)E COOL
OTHER :

MATRIX
PRESERVY
DATE
TIME

Chlorides
TPH
BTEX

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: XTO Energy

Attn: Amy Ruth

Address: 3104 E. Green St

City: Carlisbad

State: NM Zip: 88220

Phone #:

Fax #:

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Relinquished By: [Signature] Date: 4/10/24 Time: 10:24

Received By: [Signature] Date: [Blank] Time: [Blank]

Relinquished By: [Signature]

Received By: [Signature]

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp. °C: 1.4
Corrected Temp. °C: 1.4

Sample Condition Cool Intact
Yes No

CHECKED BY: [Signature] (Initials)

Turnaround Time: [Blank]
Thermometer ID # [Blank]
Correction Factor: -0.5C

Standard Rush

Bacteria (only) Sample Condition Cool Intact
Yes No

Observed Temp. °C: [Blank]
Corrected Temp. °C: [Blank]

Verbal Result: Yes No Add'l Phone #:

All Results are emailed. Please provide Email address:

Resubmits: Incident # : NAR P2335329704

Cost Center : 22033371001

API: 30-015

APR 30 2024

APR 30 2024

APR 30 2024

APR 30 2024

bell@ensolum.com
modeller@ensolum.com

† Cardinal cannot accept verbal changes. Please email changes to celey.license@cardinalhsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 16, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 17 TWIN WELLS RANCH 702H

Enclosed are the results of analyses for samples received by the laboratory on 04/11/24 16:12.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

- Method EPA 552.2 Haloacetic Acids (HAA-5)
- Method EPA 524.2 Total Trihalomethanes (TTHM)
- Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 21 4' (H241915-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29	
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43	
Total BTEX	<0.300	0.300	04/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	04/15/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	196	97.9	200	3.69	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	183	91.7	200	6.06	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 88.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 22 4' (H241915-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29	
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43	
Total BTEX	<0.300	0.300	04/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1230	16.0	04/15/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	196	97.9	200	3.69	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	183	91.7	200	6.06	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 95.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 23 4' (H241915-03)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29		
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43		
Total BTEX	<0.300	0.300	04/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1120	16.0	04/15/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	196	97.9	200	3.69		
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	183	91.7	200	6.06		
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND						

Surrogate: 1-Chlorooctane 93.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 24 4' (H241915-04)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29		
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43		
Total BTEX	<0.300	0.300	04/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2880	16.0	04/15/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	196	97.9	200	3.69		
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	183	91.7	200	6.06		
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND						

Surrogate: 1-Chlorooctane 90.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 25 4' (H241915-05)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29		
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43		
Total BTEX	<0.300	0.300	04/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1090	16.0	04/15/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	196	97.9	200	3.69		
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	183	91.7	200	6.06		
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND						

Surrogate: 1-Chlorooctane 94.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 26 4' (H241915-06)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29	
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43	
Total BTEX	<0.300	0.300	04/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	04/15/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	196	97.9	200	3.69	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	183	91.7	200	6.06	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 86.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 27 4' (H241915-07)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29		
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43		
Total BTEX	<0.300	0.300	04/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/15/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	204	102	200	2.25		
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	213	107	200	2.99		
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND						

Surrogate: 1-Chlorooctane 88.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 28 4' (H241915-08)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29		
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43		
Total BTEX	<0.300	0.300	04/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2840	16.0	04/15/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	204	102	200	2.25		
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	213	107	200	2.99		
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND						

Surrogate: 1-Chlorooctane 97.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.3 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 29 4' (H241915-09)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29		
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43		
Total BTEX	<0.300	0.300	04/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1440	16.0	04/12/2024	ND	448	112	400	0.00	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	204	102	200	2.25		
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	213	107	200	2.99		
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND						

Surrogate: 1-Chlorooctane 85.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 30 4' (H241915-10)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29	
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43	
Total BTEX	<0.300	0.300	04/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/12/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	204	102	200	2.25	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	213	107	200	2.99	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 74.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 31 2' (H241915-11)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29	
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43	
Total BTEX	<0.300	0.300	04/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/12/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	204	102	200	2.25	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	213	107	200	2.99	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 92.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 07 0-4' (H241915-12)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.06	103	2.00	4.29	
Toluene*	<0.050	0.050	04/12/2024	ND	2.07	103	2.00	3.73	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.01	101	2.00	3.59	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.13	102	6.00	3.43	
Total BTEX	<0.300	0.300	04/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/12/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	204	102	200	2.25	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	213	107	200	2.99	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 97.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 08 0-4' (H241915-13)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.23	111	2.00	3.53	
Toluene*	<0.050	0.050	04/12/2024	ND	2.16	108	2.00	5.59	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.24	112	2.00	5.56	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.80	113	6.00	6.24	
Total BTEX	<0.300	0.300	04/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/12/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	204	102	200	2.25	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	213	107	200	2.99	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 89.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/11/2024	Sampling Date:	04/11/2024
Reported:	04/16/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Dionica Hinojos
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 09 0-4' (H241915-14)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.23	111	2.00	3.53	
Toluene*	<0.050	0.050	04/12/2024	ND	2.16	108	2.00	5.59	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.24	112	2.00	5.56	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	6.80	113	6.00	6.24	
Total BTEX	<0.300	0.300	04/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 127 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/12/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	204	102	200	2.25	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	213	107	200	2.99	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 86.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.5 % 49.1-148

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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Ben Reilly
 P.O. #:

Address: 3122 National Parks Hwy
 Company: XTD Energy

City: Carlsbad
 State: NM Zip: 88220
 Attn: Amy Ruth

Phone #: 989-854-0852
 Fax #: 989-854-0852
 Address: 3104 E. Greene St

Project #: 03C1508303
 Project Owner:
 City: Carlsbad

Project Name: PLUIT TWIN WALK RANCH T02H
 State: NM Zip: 88220

Project Location: 32.2075W, -103.80037
 Phone #:

Sampler Name: Maraha O'Dell
 Fax #:

FOR LAB USE ONLY	Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	Chlorides	TPH	BTEX
						GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
	H04915	ES21	4'	C	1							4/11/24	12:35	X		
		ES22	4'	C	1							12:40	12:40	X		
		ES23	4'	C	1							12:45	12:45	X		
		ES24	4'	C	1							12:50	12:50	X		
		ES25	4'	C	1							13:05	13:05	X		
		ES26	4'	C	1							13:50	13:50	X		
		ES27	4'	C	1							13:05	13:05	X		
		ES28	4'	C	1							13:15	13:15	X		
		ES29	4'	C	1							13:20	13:20	X		
		ES30	4'	C	1							13:20	13:20	X		

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Relinquished By: [Signature]
 Date: 4/11/24
 Time: 10:12
 Received By: [Signature]
 Date: 4/11/24
 Time: 10:12

Delivered By: (Circle One)
 Observed Temp. °C: 2.92
 Corrected Temp. °C: [Blank]
 Sample Condition: Cool Inlet Yes No
 Checked By: [Signature] (Initials)
 Standard Bacteria (only) Sample Condition: Cool Inlet Yes No
 Observed Temp. °C: 4.11-24
 Corrected Temp. °C: 4.11-24

REMARKS: Incident #. NAPP2325329104
 Cost Center: 2203371001
 AP# : 30-015-41083
 Ensolum.com
 Cost Center: 2203371001
 AP# : 30-015-41083



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

BILL TO

ANALYSIS REQUEST

Project Manager: Ben Belli

P.O. #:

Address: 3122 National Parks Hwy

Company: XTO Energy

City: Carlsbad

State: NM Zip: 88220

Attn: Amy Ruth

Phone #: 989-854-0852 Fax #:

Address: 3104 E. Green 251

Project #: 03C1558303 Project Owner:

City: Carlsbad

Project Name: DU 17 Twin Wells Ranch, T02H

State: NM Zip: 88220

Project Location: 32.207514, -103.80037

Phone #:

Sampler Name: Mariaha O'Dell

Fax #:

FOR LAB USE ONLY

Lab I.D. H24915

Depth (feet)

(G)RAB OR (C)OMP.
CONTAINERS
MATRIX: GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER:
PRESERV: ACID/BASE, ICE/COOL, OTHER:
SAMPLING

DATE TIME

Chlorides
TPH
BTEX

Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV	SAMPLING	DATE	TIME	Chlorides	TPH	BTEX
11	2'		1				4/11/24	13:25	X	X	X
12	0-4'		1				13:30		X	X	
13	0-4'		1				13:35		X	X	
14	0-4'		1				13:40		X	X	

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Relinquished By: [Signature]

Date: 4/11/24
Time: 10:12

Received By: [Signature]

Relinquished By: [Signature]

Date: [Signature]
Time: [Signature]

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Observed Temp. °C: 9.5
Corrected Temp. °C:

Sample Condition Cool Intact: Yes [X] No []

CHECKED BY: [Signature]

Turnaround Time: Standard [X] Rush []
Thermometer ID # [Signature]
Corrosion Factor ASE: 4-1/104

Bacteria (only) Sample Condition Cool Intact: Yes [] No [X]
Observed Temp. °C: []
Corrected Temp. °C: []

Vertical Result: Yes No

Remarks: Incidental # : NAPP 23353297164
COST CENTER: 220331001
APT: 30-015 -47083

Verbal Results: Yes No

Additional Phone #:

All Results are emailed. Please provide Email address: dbelli@ensolum.com, modell@ensolum.com

Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 18, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 17 TWIN WELLS RANCH 702H

Enclosed are the results of analyses for samples received by the laboratory on 04/12/24 16:18.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/12/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 32 0.5' (H241952-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2024	ND	2.08	104	2.00	6.07	
Toluene*	<0.050	0.050	04/16/2024	ND	2.04	102	2.00	3.05	
Ethylbenzene*	<0.050	0.050	04/16/2024	ND	2.15	107	2.00	1.58	
Total Xylenes*	<0.150	0.150	04/16/2024	ND	6.51	108	6.00	0.488	
Total BTEX	<0.300	0.300	04/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	04/16/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	206	103	200	4.77	
DRO >C10-C28*	<10.0	10.0	04/15/2024	ND	186	93.1	200	4.32	
EXT DRO >C28-C36	<10.0	10.0	04/15/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/12/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 33 4' (H241952-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2024	ND	2.08	104	2.00	6.07	
Toluene*	<0.050	0.050	04/16/2024	ND	2.04	102	2.00	3.05	
Ethylbenzene*	<0.050	0.050	04/16/2024	ND	2.15	107	2.00	1.58	
Total Xylenes*	<0.150	0.150	04/16/2024	ND	6.51	108	6.00	0.488	
Total BTEX	<0.300	0.300	04/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1680	16.0	04/16/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	206	103	200	4.77	
DRO >C10-C28*	<10.0	10.0	04/15/2024	ND	186	93.1	200	4.32	
EXT DRO >C28-C36	<10.0	10.0	04/15/2024	ND					

Surrogate: 1-Chlorooctane 92.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.4 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/12/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 34 4' (H241952-03)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/16/2024	ND	2.08	104	2.00	6.07		
Toluene*	<0.050	0.050	04/16/2024	ND	2.04	102	2.00	3.05		
Ethylbenzene*	<0.050	0.050	04/16/2024	ND	2.15	107	2.00	1.58		
Total Xylenes*	<0.150	0.150	04/16/2024	ND	6.51	108	6.00	0.488		
Total BTEX	<0.300	0.300	04/16/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3680	16.0	04/16/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	206	103	200	4.77		
DRO >C10-C28*	<10.0	10.0	04/15/2024	ND	186	93.1	200	4.32		
EXT DRO >C28-C36	<10.0	10.0	04/15/2024	ND						

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/12/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 35 4' (H241952-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2024	ND	2.08	104	2.00	6.07	
Toluene*	<0.050	0.050	04/16/2024	ND	2.04	102	2.00	3.05	
Ethylbenzene*	<0.050	0.050	04/16/2024	ND	2.15	107	2.00	1.58	
Total Xylenes*	<0.150	0.150	04/16/2024	ND	6.51	108	6.00	0.488	
Total BTEX	<0.300	0.300	04/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1410	16.0	04/16/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	206	103	200	4.77	
DRO >C10-C28*	<10.0	10.0	04/15/2024	ND	186	93.1	200	4.32	
EXT DRO >C28-C36	<10.0	10.0	04/15/2024	ND					

Surrogate: 1-Chlorooctane 98.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/12/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 36 4' (H241952-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/15/2024	ND	2.34	117	2.00	0.405	
Toluene*	<0.050	0.050	04/15/2024	ND	2.40	120	2.00	2.04	
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.49	125	2.00	1.53	
Total Xylenes*	<0.150	0.150	04/15/2024	ND	7.45	124	6.00	0.805	
Total BTEX	<0.300	0.300	04/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3760	16.0	04/16/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	206	103	200	4.77	
DRO >C10-C28*	<10.0	10.0	04/15/2024	ND	186	93.1	200	4.32	
EXT DRO >C28-C36	<10.0	10.0	04/15/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/12/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 37 4' (H241952-06)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/15/2024	ND	2.34	117	2.00	0.405	
Toluene*	<0.050	0.050	04/15/2024	ND	2.40	120	2.00	2.04	
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.49	125	2.00	1.53	
Total Xylenes*	<0.150	0.150	04/15/2024	ND	7.45	124	6.00	0.805	
Total BTEX	<0.300	0.300	04/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4080	16.0	04/16/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	206	103	200	4.77	
DRO >C10-C28*	<10.0	10.0	04/15/2024	ND	186	93.1	200	4.32	
EXT DRO >C28-C36	<10.0	10.0	04/15/2024	ND					

Surrogate: 1-Chlorooctane 96.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Maryland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476
Company Name: Ensolum, LLC

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Project Manager: Ben Bell
Address: 3122 National Parks Hwy
City: Carlsbad **State:** NM **Zip:** 88220
Phone #: 0804-854-0852 **Fax #:**
Project #: 0361550303 **Project Owner:**
Project Name: PLU 17TWIN WELLS RANCH 702H
Project Location: 32.2075W, -103.80037
Sampler Name: Mariaha O'Dell
FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
A241958	ES32	0.5'	C	1							4/12/24	12:25	Chlorides
	ES33	4'	C	1	X						4/12/24	12:30	TPH
	ES34	4'	C	1							4/12/24	12:45	BTEX
	ES35	4'	C	1							4/12/24	12:50	
	ES36	4'	C	1							4/12/24	12:55	
	ES37	4'	C	1							4/12/24	13:00	

PLEASE NOTE: Labels and Damages. Cardinal's liability and coverage extends to the laboratory for any damage to the sample caused by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 90 days after completion of the analysis or successful delivery of or related to the performance of analytical services by Cardinal. Provisions of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: [Signature]
Date: 4/12/24
Time: 10:18
Received By: [Signature]
Date: [Signature]
Time: [Signature]

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:
Observed Temp. °C: 37
Corrected Temp. °C:
Sample Condition: Cool / Intact
Checked By: [Signature]

Remarks: INQUIRY # NAPP2335329704
Turnaround Time: Standard
Thermometer ID #49-4140
Correction Factor: -0.5°C
Backlogs (only) Sample Condition: Cool / Intact
Observed Temp. °C:
Corrected Temp. °C:



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 19, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 17 TWIN WELLS RANCH 702H

Enclosed are the results of analyses for samples received by the laboratory on 04/15/24 16:27.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/15/2024	Sampling Date:	04/15/2024
Reported:	04/19/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	** (See Notes)
Project Number:	03C1558303	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 10 0-4' (H241980-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/17/2024	ND	2.12	106	2.00	3.48	
Toluene*	<0.050	0.050	04/17/2024	ND	2.06	103	2.00	3.36	
Ethylbenzene*	<0.050	0.050	04/17/2024	ND	2.00	100	2.00	3.50	
Total Xylenes*	<0.150	0.150	04/17/2024	ND	5.84	97.4	6.00	3.42	
Total BTEX	<0.300	0.300	04/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/16/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2024	ND	195	97.6	200	4.59	
DRO >C10-C28*	<10.0	10.0	04/16/2024	ND	180	90.2	200	6.08	
EXT DRO >C28-C36	<10.0	10.0	04/16/2024	ND					

Surrogate: 1-Chlorooctane 93.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/15/2024	Sampling Date:	04/15/2024
Reported:	04/19/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	** (See Notes)
Project Number:	03C1558303	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 11 0-4' (H241980-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/17/2024	ND	2.12	106	2.00	3.48	
Toluene*	<0.050	0.050	04/17/2024	ND	2.06	103	2.00	3.36	
Ethylbenzene*	<0.050	0.050	04/17/2024	ND	2.00	100	2.00	3.50	
Total Xylenes*	<0.150	0.150	04/17/2024	ND	5.84	97.4	6.00	3.42	
Total BTEX	<0.300	0.300	04/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/16/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2024	ND	195	97.6	200	4.59	
DRO >C10-C28*	<10.0	10.0	04/16/2024	ND	180	90.2	200	6.08	
EXT DRO >C28-C36	<10.0	10.0	04/16/2024	ND					

Surrogate: 1-Chlorooctane 94.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.4 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/15/2024	Sampling Date:	04/15/2024
Reported:	04/19/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	** (See Notes)
Project Number:	03C1558303	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 12 0-4' (H241980-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/17/2024	ND	2.12	106	2.00	3.48	
Toluene*	<0.050	0.050	04/17/2024	ND	2.06	103	2.00	3.36	
Ethylbenzene*	<0.050	0.050	04/17/2024	ND	2.00	100	2.00	3.50	
Total Xylenes*	<0.150	0.150	04/17/2024	ND	5.84	97.4	6.00	3.42	
Total BTEX	<0.300	0.300	04/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/16/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2024	ND	195	97.6	200	4.59	
DRO >C10-C28*	<10.0	10.0	04/16/2024	ND	180	90.2	200	6.08	
EXT DRO >C28-C36	<10.0	10.0	04/16/2024	ND					

Surrogate: 1-Chlorooctane 88.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/15/2024	Sampling Date:	04/15/2024
Reported:	04/19/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	** (See Notes)
Project Number:	03C1558303	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.20756, -103.80637		

Sample ID: SW 13 0-4' (H241980-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/17/2024	ND	2.12	106	2.00	3.48	
Toluene*	<0.050	0.050	04/17/2024	ND	2.06	103	2.00	3.36	
Ethylbenzene*	<0.050	0.050	04/17/2024	ND	2.00	100	2.00	3.50	
Total Xylenes*	<0.150	0.150	04/17/2024	ND	5.84	97.4	6.00	3.42	
Total BTEX	<0.300	0.300	04/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/16/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/17/2024	ND	195	97.6	200	4.59	
DRO >C10-C28*	<10.0	10.0	04/17/2024	ND	180	90.2	200	6.08	
EXT DRO >C28-C36	<10.0	10.0	04/17/2024	ND					

Surrogate: 1-Chlorooctane 88.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/15/2024	Sampling Date:	04/15/2024
Reported:	04/19/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	** (See Notes)
Project Number:	03C1558303	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 38 4' (H241980-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/17/2024	ND	2.12	106	2.00	3.48	
Toluene*	<0.050	0.050	04/17/2024	ND	2.06	103	2.00	3.36	
Ethylbenzene*	<0.050	0.050	04/17/2024	ND	2.00	100	2.00	3.50	
Total Xylenes*	<0.150	0.150	04/17/2024	ND	5.84	97.4	6.00	3.42	
Total BTEX	<0.300	0.300	04/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	04/16/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2024	ND	213	107	200	2.44	
DRO >C10-C28*	<10.0	10.0	04/16/2024	ND	219	110	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	04/16/2024	ND					

Surrogate: 1-Chlorooctane 97.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.6 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/15/2024	Sampling Date:	04/15/2024
Reported:	04/19/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	** (See Notes)
Project Number:	03C1558303	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 39 4' (H241980-06)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/17/2024	ND	2.12	106	2.00	3.48	
Toluene*	<0.050	0.050	04/17/2024	ND	2.06	103	2.00	3.36	
Ethylbenzene*	<0.050	0.050	04/17/2024	ND	2.00	100	2.00	3.50	
Total Xylenes*	<0.150	0.150	04/17/2024	ND	5.84	97.4	6.00	3.42	
Total BTEX	<0.300	0.300	04/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.7 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1260	16.0	04/17/2024	ND	432	108	400	0.00	QM-07

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2024	ND	213	107	200	2.44	
DRO >C10-C28*	<10.0	10.0	04/16/2024	ND	219	110	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	04/16/2024	ND					

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/15/2024	Sampling Date:	04/15/2024
Reported:	04/19/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	** (See Notes)
Project Number:	03C1558303	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 40 4' (H241980-07)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/17/2024	ND	2.12	106	2.00	3.48	
Toluene*	<0.050	0.050	04/17/2024	ND	2.06	103	2.00	3.36	
Ethylbenzene*	<0.050	0.050	04/17/2024	ND	2.00	100	2.00	3.50	
Total Xylenes*	<0.150	0.150	04/17/2024	ND	5.84	97.4	6.00	3.42	
Total BTEX	<0.300	0.300	04/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.7 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	04/17/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2024	ND	213	107	200	2.44	
DRO >C10-C28*	<10.0	10.0	04/16/2024	ND	219	110	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	04/16/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/15/2024	Sampling Date:	04/15/2024
Reported:	04/19/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	** (See Notes)
Project Number:	03C1558303	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.20756, -103.80637		

Sample ID: FS 41 4' (H241980-08)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/17/2024	ND	2.12	106	2.00	3.48	
Toluene*	<0.050	0.050	04/17/2024	ND	2.06	103	2.00	3.36	
Ethylbenzene*	<0.050	0.050	04/17/2024	ND	2.00	100	2.00	3.50	
Total Xylenes*	<0.150	0.150	04/17/2024	ND	5.84	97.4	6.00	3.42	
Total BTEX	<0.300	0.300	04/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2600	16.0	04/17/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2024	ND	213	107	200	2.44	
DRO >C10-C28*	<10.0	10.0	04/16/2024	ND	219	110	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	04/16/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC
Project Manager: Ben Beilli
Address: 3122 National Parks Hwy
City: Carlsbad **State:** NM **Zip:** 88220
Phone #: 989-854-0852 **Fax #:**
Project #: 03C1558303 **Project Owner:**
Project Name: PLUIT TWIN WELLS Ranch 702H
Project Location: 32.2075W, -103.80037
Sampler Name: Mariaha O'Dell
FOR LAB USE ONLY

Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
AB41980	0-4'	C	1	X					4/15/24	10:55	Chlorides	
SM10	0-4'	C	1	X					12:00	12:35	TPH	
SM11	0-4'								13:00	12:10	BTEX	
SM12	0-4'								12:15	12:20		
SM13	0-4'								12:40			
ES38	4'											
ES39	4'											
ES40	4'											
ES41	4'											

REMARKS: Incident #: NAPP2335329704
 Cost Center: 2203371001
 API: 30-015-47083

Vertical Results: Yes No **Add'l Phone #:**
 All Results are emailed. Please provide Email address:
 bbeilli@ensolum.com, modell@ensolum.com

RESUBMIT: Yes No

Turnaround Time: Standard Rush
 Turnaround Fee: \$140
 Thermometer ID: 6113
 Correction Factor: 0.5°C

Delivered By: (Circle One) UPS Bus Other
Sampler - UPS - Bus - Other:
 Observed Temp. °C: 11.1°C
 Corrected Temp. °C:
 Bacteria (only) Sample Condition: Cool Intact
 Cool Intact: Yes No
 Observed Temp. °C:
 Corrected Temp. °C:

Requisitioned By: [Signature]
Date: 4/15/24
Time: 11:02
Received By: [Signature]
Date: 4/15/24
Time: 11:02

Checked By: [Signature]

Vertical Results: Yes No **Add'l Phone #:**
 All Results are emailed. Please provide Email address:
 bbeilli@ensolum.com, modell@ensolum.com

RESUBMIT: Yes No

Turnaround Time: Standard Rush
 Turnaround Fee: \$140
 Thermometer ID: 6113
 Correction Factor: 0.5°C

Delivered By: (Circle One) UPS Bus Other
Sampler - UPS - Bus - Other:
 Observed Temp. °C: 11.1°C
 Corrected Temp. °C:
 Bacteria (only) Sample Condition: Cool Intact
 Cool Intact: Yes No
 Observed Temp. °C:
 Corrected Temp. °C:



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 23, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 17 TWIN WELLS RANCH 702H

Enclosed are the results of analyses for samples received by the laboratory on 04/17/24 15:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/17/2024	Sampling Date:	04/17/2024
Reported:	04/23/2024	Sampling Type:	Soil
Project Name:	PLU 17 TWIN WELLS RANCH 702H	Sampling Condition:	Cool & Intact
Project Number:	03C1558303	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.20756, -103.80637		

Sample ID: BF 01 (H242061-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/20/2024	ND	2.11	105	2.00	5.75	
Toluene*	<0.050	0.050	04/20/2024	ND	2.19	109	2.00	11.2	
Ethylbenzene*	<0.050	0.050	04/20/2024	ND	2.28	114	2.00	11.5	
Total Xylenes*	<0.150	0.150	04/20/2024	ND	6.83	114	6.00	11.3	
Total BTEX	<0.300	0.300	04/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/22/2024	ND	480	120	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/19/2024	ND	192	96.1	200	7.38	
DRO >C10-C28*	<10.0	10.0	04/19/2024	ND	185	92.3	200	7.11	
EXT DRO >C28-C36	<10.0	10.0	04/19/2024	ND					

Surrogate: 1-Chlorooctane 63.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.5 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 1

BILL TO

ANALYSIS REQUEST

Project Manager: Ben Belli
 Address: 3122 National Parks Hwy
 City: Carlsbad
 Phone #: 989-854-0852
 Project #: 03C1558303
 Project Name: PLU 17 TWIN WELLS RANCH 702H
 Project Location: 32.2075W -103.80037
 Sampler Name: Manaha O'Dell

P.O. #:
 Company: XTO Energy
 Attn: Amy Ruth
 Address: 3104 E. Green St
 City: Carlsbad
 State: NM Zip: 88220
 Phone #:
 Fax #:

FOR LAB USE ONLY
 Lab I.D. H24004
 Sample I.D. 41724

Depth (feet)

1 BFO1

(G)RAB OR (C)OMP.	
# CONTAINERS	C 1
MATRIX	
GROUNDWATER	
WASTEWATER	
SOIL	X
OIL	
SLUDGE	
OTHER :	
ACID/BASE:	
ICE / COOL	X
OTHER :	
DATE	4/17/24
TIME	0:00

Chloride X
 TPH X
 BTEX X

PLEASE NOTE: Liability and Damages: Cardinal's facility and clients exclude liability for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed voided unless made in writing and received by Cardinal within 30 days after completion of the applicable analysis. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors without limit of or related to the performance of services hereunder by Cardinal. Receipt of this form shall constitute acceptance of the above stated terms and conditions.

Relinquished By: *[Signature]*
 Date: 4/17/24
 Time: 13:45
 Received By: *[Signature]*
 Date: 4/17/24
 Time: 13:45

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other:
 Observed Temp. °C: 17.7
 Corrected Temp. °C:
 Sample Condition: Cool Intact
 Checked By: *[Signature]*

† Cardinal cannot accept verbal changes. Please email changes to coby.keene@cardinalhsnm.com

Verbal Results: Yes No
 All Results are emailed. Please provide email address:
 lbelli@ensolum.com, modli@ensolum.com
 RESEARCHS: Incident #: NAPP2335329704
 Cost Center: 2203371001
 AP I. 30-015-17083
 Turnaround Time: Standard Rush
 Thermometer ID: #140
 Correction Factor: -0.5°C
 Bacteria (only) Sample Condition: Cool Intact
 Observed Temp. °C: Yes No
 Corrected Temp. °C: Yes No

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

QUESTIONS

Action 352631

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 352631
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2335329764
Incident Name	NAPP2335329764 PLU 17 TWIN WELLS RANCH 702H @ 0
Incident Type	Produced Water Release
Incident Status	Reclamation Report Received

Location of Release Source

Please answer all the questions in this group.

Site Name	PLU 17 Twin Wells Ranch 702H
Date Release Discovered	12/11/2023
Surface Owner	Federal

Incident Details

Please answer all the questions in this group.

Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release

Material(s) released, please answer all that apply below. Any calculations or specific justifications 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 Other (Specify) Produced Water Released: 392 BBL Recovered: 0 BBL Lost: 392 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)	A water transfer line supplying rig failed, releasing fluids to ground.

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QUESTIONS, Page 2

Action 352631

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 352631
	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)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	<i>Not answered.</i>

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Melanie Collins Title: Regulatory Analyst Email: Melanie.Collins@exxonmobil.com Date: 12/19/2023
--	---

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 352631
	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 100 and 500 (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 ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between ½ and 1 (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 ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (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	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	6910
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	70.8
GRO+DRO (EPA SW-846 Method 8015M)	70.8
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	05/07/2024
On what date will (or did) the final sampling or liner inspection occur	08/05/2024
On what date will (or was) the remediation complete(d)	08/05/2024
What is the estimated surface area (in square feet) that will be reclaimed	27510
What is the estimated volume (in cubic yards) that will be reclaimed	5000
What is the estimated surface area (in square feet) that will be remediated	27510
What is the estimated volume (in cubic yards) that will be remediated	5000

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 352631

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 352631
	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	HALFWAY DISPOSAL AND LANDFILL [FEEM0112334510]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	No
OR is the off-site disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No

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: Amy Ruth Title: Coordinator SSHE Environmental Email: amy.ruth@exxonmobil.com Date: 03/07/2024
--	---

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 5

Action 352631

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 352631
	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
--	----

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720
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 811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720
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QUESTIONS, Page 6

Action 352631

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 352631
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	332353
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/19/2024
What was the (estimated) number of samples that were to be gathered	60
What was the sampling surface area in square feet	29600

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	29600
What was the total volume (cubic yards) remediated	3100
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	29600
What was the total volume (in cubic yards) reclaimed	3100
Summarize any additional remediation activities not included by answers (above)	N/A

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: Amy Ruth Title: Coordinator SSHE Environmental Email: amy.ruth@exxonmobil.com Date: 06/10/2024
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District I
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS, Page 7

Action 352631

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 352631
	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	29600
What was the total volume of replacement material (in cubic yards) for this site	3100

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)	07/10/2024

Summarize any additional reclamation activities not included by answers (above)	Details of seeding activities/proposed are within attached report.
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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: Amy Ruth Title: Coordinator SSHE Environmental Email: amy.ruth@exxonmobil.com Date: 06/10/2024
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QUESTIONS, Page 8

Action 352631

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 352631
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Revegetation Report	
<i>Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.</i>	
Requesting a restoration complete approval with this submission	No
<i>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.</i>	

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CONDITIONS

Action 352631

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 352631
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	6/17/2024