

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

State of New Mexico
Energy Minerals and Natural
Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2322751480
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	XTO Energy	OGRID	5380
Contact Name	Garrett Green	Contact Telephone	575-200-0729
Contact email	garrett.green@exxonmobil.com	Incident #	(assigned by OCD)
Contact mailing address	3104 E. Greene Street, Carlsbad, New Mexico, 88220		

Location of Release Source

Latitude 32.61348 Longitude -103.49561
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Perla Verde 31 State Battery	Site Type	Tank Battery
Date Release Discovered	08/01/2023	API#	(if applicable)

Unit Letter	Section	Township	Range	County
J	31	19S	35E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 60.00	Volume Recovered (bbls) 60.00
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Transfer pumps did not engage as programmed, causing fluids to overflow tank into impermeable containment. All fluids were recovered. A third-party contractor has been retained for remediation purposes.

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? A release equal to or greater than 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Melanie Collins to ocd.enviro@emnrd.nm.gov, Robert.Hamlet@emnrd.nm.gov, mike.bratcher@emnrd.nm.gov, and Jocelyn.Harimon@emnrd.nm.gov on 08/02/2023 via email.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: NA	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Garrett Green</u>	Title: <u>SSHE Coordinator</u>
Signature: <u></u>	Date: <u>8/15/2023</u>
email: <u>garrett.green@exxonmobil.com</u>	Telephone: <u>575-200-0729</u>
<u>OCD Only</u>	
Received by: <u>Shelly Wells</u>	Date: <u>8/16/2023</u>

NAPP2322751480

Location:	Perla Verde Battery	
Spill Date:	8/1/2023	
Area 1		
Approximate Area =	336.87	cu.ft.
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	60.00	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	60.00	bbls
TOTAL VOLUME RECOVERED		
Total Crude Oil =	0.00	bbls
Total Produced Water =	60.00	bbls

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico

Energy, Minerals and Natural Resources

Oil Conservation Division

1220 S. St Francis Dr.

Santa Fe, NM 87505

CONDITIONS

Action 252405

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 252405
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	8/16/2023

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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>51</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

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

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Oil Conservation Division

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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Garrett Green

Title: SSHE Coordinator

Signature: 

Date: Oct 30 2023

email: garrett.green@exxonmobil.com

Telephone: 575-200-0729

OCD Only

Received by: Shelly Wells

Date: 10/31/2023

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Closure

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

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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.

Printed Name: Garrett Green Title: SSHE Coordinator
Signature:  Date: Oct 30 2023
email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Shelly Wells Date: 10/31/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  Date: 02/20/2024
Printed Name: Nelson Velez Title: Environmental Specialist – Adv



October 30, 2023

New Mexico Oil Conservation Division

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

**Re: Closure Request
Perla Verde 31 State Battery
Incident Number nAPP2322751480
Lea 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 site assessment and soil sampling activities performed at the Perla Verde 31 State Battery (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a release of produced water within the lined containment at the Site. Based on field observations, field screening activities, and laboratory analytical results, XTO is submitting this *Closure Request* and requesting closure for Incident Number nAPP2322751480.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit J, Section 31, Township 19 South, Range 35 East, in Lea County, New Mexico (32.61348°, -103.49561°) and is associated with oil and gas exploration and production operations on New Mexico State Trust Land managed by the New Mexico State Land Office (NMSLO).

On August 1, 2023, transfer pumps at the Site did not engage as programmed, causing 60 barrels (bbls) of produced water to release into the lined containment. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; all 60 bbls of produced water were recovered. A liner integrity inspection was conducted by XTO personnel immediately following the fluid recovery and upon inspection, the liner was determined to be insufficient. A tear in the liner on the vertical side of the containment was observed. XTO reported the release immediately to the New Mexico Oil Conservation Division (NMOCD) via email on August 2, 2023, and subsequently submitted a Release Notification Form C-141 (Form C-141) on August 15, 2023. The release was assigned Incident Number nAPP2322751480.

Since the release remained on pad and inside the lined containment area, the Site is exempt from the Cultural Properties Protection Rule (CPP). As such no additional cultural resource surveys were completed in connection with this release.

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 on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

XTO Energy, Inc
 Closure Request
 Perla Verde 31 State Battery

Depth to groundwater at the Site is estimated to be between 51 and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 323545103285701, located approximately 1.15 miles southeast of the Site. The groundwater well has a reported depth to groundwater of 53.4 feet bgs and a total depth of 70 feet bgs. Based on the desktop review, there was one other well (L-14552 POD3) that was closer to the Site, but only the well permits were available for review, and depth to water data was missing. The well record is included in Appendix A and all wells used to evaluate depth to groundwater are presented on Figure 1.

The closest continuously flowing or significant watercourse is greater than 300 feet from the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, significant water course, or wetland. The Site is greater than 1,000 feet from a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area).

Based on the closest depth to groundwater data exceeding a distance of 0.5 miles from the Site, as preferred by the NMOCD, the following 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): 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT ACTIVITIES

On September 19, and September 29, 2023, Site assessment activities were conducted to evaluate the presence or absence of impacted soil resulting from the liner tear. The liner integrity inspection results indicated a small tear existed on the sidewall of the containment. By the time Ensolum personnel arrived onsite to complete the Site assessment, the tear in the liner on the containment sidewall had been repaired. Though the fluid levels from the release did not reach the height of the tear in the liner, one borehole (BH01) was advanced via hand auger immediately adjacent to the repaired containment sidewall, outside of containment, to confirm no fluids had breached the containment through the tear in the sidewall. Two discrete delineation soil samples were collected from the borehole at depths of approximately 0.5 feet and 1-foot bgs. Soil from the borehole was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips, respectively. Field screening results and observations from the borehole were documented on a lithologic/soil sampling log, which is included as Appendix B. Four additional delineation soil samples (SS01 through SS04) were collected around the lined containment from a depth of 0.5 feet bgs to further confirm the release did not leave the lined containment. The borehole and soil sample locations are depicted on Figure 2. Photographic documentation was conducted during the Site visit. A photographic log is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported 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-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

XTO Energy, Inc
Closure Request
Perla Verde 31 State Battery

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples SS01 through SS04 and BH01/BH01A, indicated that all COC concentrations were compliant with the strictest Table I Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D. NMOCD notifications are provided in Appendix E.

CLOSURE REQUEST

Following the failed liner integrity inspection at the Site, Ensolum personnel advanced one borehole (BH01) immediately adjacent to the liner tear on the containment sidewall to assess for the presence or absence of impacted soil resulting from the August 1, 2023 produced water release. Two delineation soil samples were collected from borehole BH01, at depths of approximately 0.5 feet and 1-foot bgs and four delineation soil samples were collected at a depth of 0.5 feet bgs around the containment area. Laboratory analytical results for all delineation soil samples indicated all COC concentrations were compliant with the strictest Table I Closure Criteria. The release was contained vertically and laterally by the lined containment and all release fluids were recovered during initial response activities.

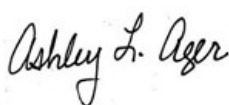
The release remained on the well pad and within the containment area that is currently in operation for oil and gas production purposes. As such, the release area is not expected to be reclaimed until the oil and gas well is plugged and abandoned (P&A'd) and the well pad is reclaimed. The Reclamation Plan for this release will default to the NMSLO-approved Reclamation Plan for the well pad per 19.2.100.67 NMAC.

Based on initial response efforts and soil sample laboratory analytical results compliant with the Closure Criteria and the strictest Table I Closure Criteria, XTO respectfully requests closure for Incident Number nAPP2322751480. If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC



Meredith Roberts
Staff Geologist



Ashley L. Ager, MS, PG
Principal

cc: Garrett Green, XTO
Tommee Lambert, XTO
NMSLO

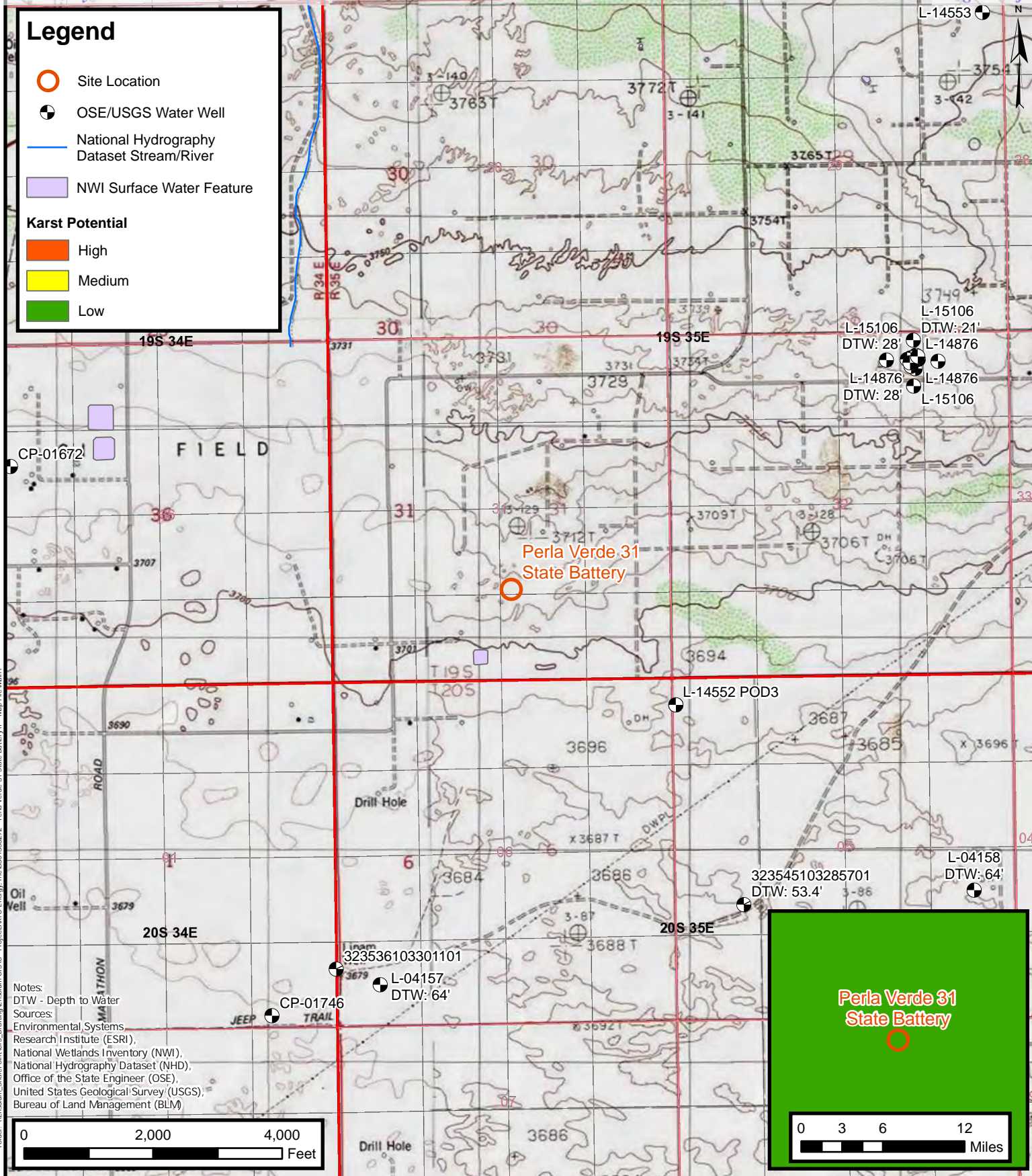
Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Well Record and Log
Appendix B	Lithologic / Soil Sampling Log
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications





FIGURES

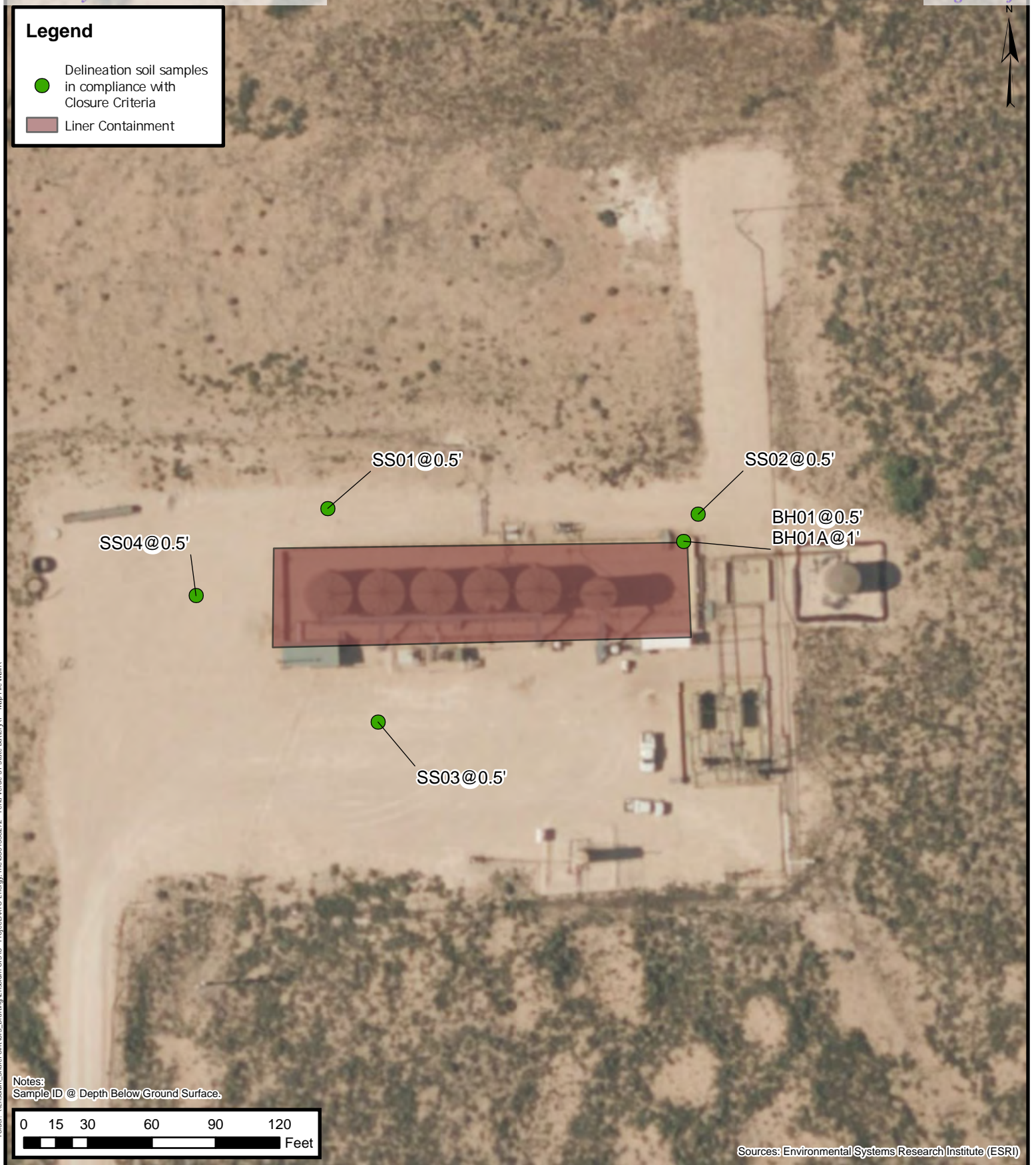


Site Receptor Map

XTO Energy, Inc
 Perla Verde 31 State Battery
 Incident Number: nAPP2322751480
 Unit J, Sec 31, T19S, R35E
 Lea County, New Mexico

FIGURE

1



Delineation Soil Sample Locations

XTO Energy, Inc
Perla Verde 31 State Battery
Incident Number: nAPP2322751480
Unit J, Sec 31, T19S, R35E
Lea County, New Mexico

FIGURE
2



TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Perla Verde 31 State Battery
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
SS01	09/19/2023	0.5	<0.00201	<0.00402	<50.1	<50.1	<50.1	<50.1	<50.1	167
SS02	09/19/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	127
SS03	09/19/2023	0.5	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	149
SS04	09/19/2023	0.5	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	122
BH01	09/29/2023	0.5	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	176
BH01A	09/29/2023	1	<0.00198	<0.00396	<50.5	<50.5	<50.5	<50.5	<50.5	140

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



APPENDIX A

Referenced Well Records



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater
Geographic Area: United States
GO

Click to hideNews Bulletins

- Explore the NEW [USGS National Water Dashboard](#) interactive map to access real-time water data from over 13,500 stations nationwide.
- [Full News](#)

Groundwater levels for the Nation

Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 323545103285701

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 323545103285701 20S.35E.05.31424

Lea County, New Mexico
Latitude 32°35'59", Longitude 103°29'03" NAD27
Land-surface elevation 3,685.00 feet above NGVD29
The depth of the well is 70 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Ogallala Formation (121OGLL) 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 of measurement
1961-03-08			D 62610		3623.44	NGVD29	P		Z	
1961-03-08			D 62611		3624.98	NAVD88	P		Z	
1961-03-08			D 72019	61.56			P		Z	
1966-04-06			D 62610		3631.13	NGVD29	1		Z	
1966-04-06			D 62611		3632.67	NAVD88	1		Z	
1966-04-06			D 72019	53.87			1		Z	
1971-01-21			D 62610		3630.42	NGVD29	P		Z	
1971-01-21			D 62611		3631.96	NAVD88	P		Z	
1971-01-21			D 72019	54.58			P		Z	
1976-02-19			D 62610		3631.44	NGVD29	1		Z	
1976-02-19			D 62611		3632.98	NAVD88	1		Z	
1976-02-19			D 72019	53.56			1		Z	
1981-02-17			D 62610		3631.60	NGVD29	1		Z	
1981-02-17			D 62611		3633.14	NAVD88	1		Z	
1981-02-17			D 72019	53.40			1		Z	
1986-04-02			D 62610		3632.17	NGVD29	1		Z	

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 of measurement
1986-04-02			D	62611	3633.71	NAVD88	1		Z	
1986-04-02			D	72019	52.83		1		Z	
1991-07-03			D	62610	3630.77	NGVD29	1		S	
1991-07-03			D	62611	3632.31	NAVD88	1		S	
1991-07-03			D	72019	54.23		1		S	
1996-01-25			D	62610	3631.52	NGVD29	1		S	
1996-01-25			D	62611	3633.06	NAVD88	1		S	
1996-01-25			D	72019	53.48		1		S	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
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
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

[Questions or Comments](#)

[Automated retrievals](#)

[Help](#)

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Title: Groundwater for USA: Water Levels

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



Page Contact Information: [USGS Water Data Support Team](#)


Page Last Modified: 2023-10-16 15:46:43 EDT

0.35 0.29 nadww02



APPENDIX B

Lithologic Soil Sampling Logs

						Sample Name: BH01		Date: 9/29/2023	
						Site Name: Perla Verde 31 State Battery			
						Incident Number: nAPP2322751480			
						Job Number: 03C1558272			
LITHOLOGIC / SOIL SAMPLING LOG						Logged By: MR		Method: Hand Auger	
Coordinates: 32.613546, -103.495624						Hole Diameter: 4"		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 was added for all chloride field screenings.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions	
M	230	0.3	N	BH01	0.5	0		0-1' CALICHE, medium brown, medium to coarse grained, poorly sorted, sub-rounded grains, no stain, no odor, moist.	
M	<162.4	0.1	N	BH01A	1	1		Total Depth @ 1' bgs.	
						TD			



APPENDIX C

Photographic Log



Photographic Log

XTO Energy, Inc

Perla Verde 31 State Battery

Incident Number nAPP2322751480



Photograph 1 Date: 8/14/2023
Description: Liner inspection activities, liner condition.
View: West



Photograph 2 Date: 8/14/2023
Description: Liner inspection, liner tear on side.
View: Northeast



Photograph 3 Date: 9/29/2023
Description: Patched liner location circled in red.
View: North



Photograph 4 Date: 9/29/2023
Description: Borehole BH01, adjacent to sidewall tear.
View: South



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill

Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 10/16/2023 3:08:59 PM Revision 1

JOB DESCRIPTION

Perla Verde 31 State Battery

SDG NUMBER 03C1558272

JOB NUMBER

890-5310-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

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

Authorization



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

Generated
10/16/2023 3:08:59 PM
Revision 1

Client: Ensolum
Project/Site: Perla Verde 31 State Battery

Laboratory Job ID: 890-5310-1
SDG: 03C1558272

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Definitions/Glossary

Client: Ensolum
Project/Site: Perla Verde 31 State Battery

Job ID: 890-5310-1
SDG: 03C1558272

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Eurofins Carlsbad

Case Narrative

Client: Ensolum
Project/Site: Perla Verde 31 State Battery

Job ID: 890-5310-1
SDG: 03C1558272

Job ID: 890-5310-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5310-1

REVISION

The report being provided is a revision of the original report sent on 9/26/2023. The report (revision 1) is being revised due to Per client email, requesting project ID correction.

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 9/20/2023 4:04 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -0.2°C

Receipt Exceptions

The following samples analyzed for method <FRACTION_METHOD> were received and analyzed from an unpreserved bulk soil jar: SS01 (890-5310-1), SS02 (890-5310-2), SS03 (890-5310-3) and SS04 (890-5310-4).

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-5310-A-1-H MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-63132/20), (CCV 880-63132/5) and (LCS 880-63115/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-63115 and analytical batch 880-63132 contained Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples 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 880-63064 and analytical batch 880-63234 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Perla Verde 31 State BatteryJob ID: 890-5310-1
SDG: 03C1558272

Client Sample ID: SS01

Lab Sample ID: 890-5310-1

Date Collected: 09/19/23 11:22

Matrix: Solid

Date Received: 09/20/23 16:04

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		09/22/23 12:00	09/22/23 15:19	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/22/23 12:00	09/22/23 15:19	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/22/23 12:00	09/22/23 15:19	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		09/22/23 12:00	09/22/23 15:19	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		09/22/23 12:00	09/22/23 15:19	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/22/23 12:00	09/22/23 15:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130	09/22/23 12:00	09/22/23 15:19	1
1,4-Difluorobenzene (Surr)	92		70 - 130	09/22/23 12:00	09/22/23 15:19	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/22/23 15:19	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			09/23/23 11:10	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		09/22/23 17:09	09/23/23 11:10	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		09/22/23 17:09	09/23/23 11:10	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		09/22/23 17:09	09/23/23 11:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	77		70 - 130	09/22/23 17:09	09/23/23 11:10	1
o-Terphenyl	74		70 - 130	09/22/23 17:09	09/23/23 11:10	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	167	F1	5.04	mg/Kg			09/25/23 19:43	1

Client Sample ID: SS02

Lab Sample ID: 890-5310-2

Date Collected: 09/19/23 10:48

Matrix: Solid

Date Received: 09/20/23 16:04

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		09/22/23 12:00	09/22/23 15:39	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/22/23 12:00	09/22/23 15:39	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/22/23 12:00	09/22/23 15:39	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		09/22/23 12:00	09/22/23 15:39	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		09/22/23 12:00	09/22/23 15:39	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/22/23 12:00	09/22/23 15:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	09/22/23 12:00	09/22/23 15:39	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Perla Verde 31 State BatteryJob ID: 890-5310-1
SDG: 03C1558272

Client Sample ID: SS02

Date Collected: 09/19/23 10:48

Date Received: 09/20/23 16:04

Sample Depth: 0.5'

Lab Sample ID: 890-5310-2

Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	92		70 - 130	09/22/23 12:00	09/22/23 15:39	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			09/22/23 15:39	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			09/23/23 12:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/22/23 17:09	09/23/23 12:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/22/23 17:09	09/23/23 12:14	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/22/23 17:09	09/23/23 12:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130			09/22/23 17:09	09/23/23 12:14	1
o-Terphenyl	83		70 - 130			09/22/23 17:09	09/23/23 12:14	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	127		5.03	mg/Kg			09/25/23 20:00	1

Client Sample ID: SS03

Date Collected: 09/19/23 10:41

Date Received: 09/20/23 16:04

Sample Depth: 0.5'

Lab Sample ID: 890-5310-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/22/23 12:00	09/22/23 17:03	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/22/23 12:00	09/22/23 17:03	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/22/23 12:00	09/22/23 17:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/22/23 12:00	09/22/23 17:03	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/22/23 12:00	09/22/23 17:03	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/22/23 12:00	09/22/23 17:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		70 - 130	09/22/23 12:00	09/22/23 17:03	1
1,4-Difluorobenzene (Surr)	78		70 - 130	09/22/23 12:00	09/22/23 17:03	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/22/23 17:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7	mg/Kg			09/23/23 12:35	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Perla Verde 31 State Battery

Job ID: 890-5310-1
SDG: 03C1558272

Client Sample ID: SS03

Lab Sample ID: 890-5310-3

Date Collected: 09/19/23 10:41

Matrix: Solid

Date Received: 09/20/23 16:04

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		09/22/23 17:09	09/23/23 12:35	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		09/22/23 17:09	09/23/23 12:35	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		09/22/23 17:09	09/23/23 12:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130			09/22/23 17:09	09/23/23 12:35	1
o-Terphenyl	76		70 - 130			09/22/23 17:09	09/23/23 12:35	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	149		4.98	mg/Kg			09/25/23 20:06	1

Client Sample ID: SS04

Lab Sample ID: 890-5310-4

Date Collected: 09/19/23 10:38

Matrix: Solid

Date Received: 09/20/23 16:04

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		09/22/23 12:00	09/22/23 17:23	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/22/23 12:00	09/22/23 17:23	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/22/23 12:00	09/22/23 17:23	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/22/23 12:00	09/22/23 17:23	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/22/23 12:00	09/22/23 17:23	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/22/23 12:00	09/22/23 17:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		70 - 130			09/22/23 12:00	09/22/23 17:23	1
1,4-Difluorobenzene (Surr)	96		70 - 130			09/22/23 12:00	09/22/23 17:23	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/22/23 17:23	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7	mg/Kg			09/23/23 12:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	mg/Kg		09/22/23 17:09	09/23/23 12:56	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		09/22/23 17:09	09/23/23 12:56	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		09/22/23 17:09	09/23/23 12:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130			09/22/23 17:09	09/23/23 12:56	1
o-Terphenyl	76		70 - 130			09/22/23 17:09	09/23/23 12:56	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Perla Verde 31 State Battery

Job ID: 890-5310-1
SDG: 03C1558272

Client Sample ID: SS04
Date Collected: 09/19/23 10:38
Date Received: 09/20/23 16:04
Sample Depth: 0.5'

Lab Sample ID: 890-5310-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	122		4.96	mg/Kg			09/25/23 20:12	1

- 1
- 2
- 3
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- 10
- 11
- 12
- 13
- 14

Surrogate Summary

Client: Ensolum
Project/Site: Perla Verde 31 State Battery

Job ID: 890-5310-1
SDG: 03C1558272

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-33489-A-1-C MS	Matrix Spike	123	103
880-33489-A-1-D MSD	Matrix Spike Duplicate	118	105
890-5310-1	SS01	84	92
890-5310-2	SS02	79	92
890-5310-3	SS03	76	78
890-5310-4	SS04	76	96
LCS 880-63016/1-A	Lab Control Sample	112	104
LCSD 880-63016/2-A	Lab Control Sample Dup	112	109
MB 880-63016/5-A	Method Blank	74	93
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-5310-1	SS01	77	74
890-5310-1 MS	SS01	81	71
890-5310-1 MSD	SS01	79	69 S1-
890-5310-2	SS02	90	83
890-5310-3	SS03	84	76
890-5310-4	SS04	83	76
LCS 880-63115/2-A	Lab Control Sample	132 S1+	138 S1+
LCSD 880-63115/3-A	Lab Control Sample Dup	103	103
MB 880-63115/1-A - IN3	Method Blank	111	111
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Perla Verde 31 State BatteryJob ID: 890-5310-1
SDG: 03C1558272

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-63016/5-A

Matrix: Solid

Analysis Batch: 63041

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 63016

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/21/23 16:26	09/22/23 11:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/21/23 16:26	09/22/23 11:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/21/23 16:26	09/22/23 11:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/21/23 16:26	09/22/23 11:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/21/23 16:26	09/22/23 11:52	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/21/23 16:26	09/22/23 11:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130	09/21/23 16:26	09/22/23 11:52	1
1,4-Difluorobenzene (Surr)	93		70 - 130	09/21/23 16:26	09/22/23 11:52	1

Lab Sample ID: LCS 880-63016/1-A

Matrix: Solid

Analysis Batch: 63041

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 63016

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09536		mg/Kg		95	70 - 130
Toluene	0.100	0.09705		mg/Kg		97	70 - 130
Ethylbenzene	0.100	0.09230		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	0.200	0.1933		mg/Kg		97	70 - 130
o-Xylene	0.100	0.09527		mg/Kg		95	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-63016/2-A

Matrix: Solid

Analysis Batch: 63041

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 63016

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09460		mg/Kg		95	70 - 130	1	35
Toluene	0.100	0.09742		mg/Kg		97	70 - 130	0	35
Ethylbenzene	0.100	0.09571		mg/Kg		96	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2044		mg/Kg		102	70 - 130	6	35
o-Xylene	0.100	0.1026		mg/Kg		103	70 - 130	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: 880-33489-A-1-C MS

Matrix: Solid

Analysis Batch: 63041

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 63016

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0996	0.09461		mg/Kg		95	70 - 130
Toluene	<0.00200	U	0.0996	0.09238		mg/Kg		93	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Perla Verde 31 State BatteryJob ID: 890-5310-1
SDG: 03C1558272

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

Lab Sample ID: 880-33489-A-1-C MS

Matrix: Solid

Analysis Batch: 63041

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 63016

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0996	0.08903		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.199	0.1783		mg/Kg		90	70 - 130
o-Xylene	<0.00200	U	0.0996	0.08863		mg/Kg		89	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	123		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 880-33489-A-1-D MSD

Matrix: Solid

Analysis Batch: 63041

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 63016

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.09509		mg/Kg		95	70 - 130	1	35
Toluene	<0.00200	U	0.0996	0.09511		mg/Kg		95	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.0996	0.09523		mg/Kg		96	70 - 130	7	35
m-Xylene & p-Xylene	<0.00399	U	0.199	0.1997		mg/Kg		100	70 - 130	11	35
o-Xylene	<0.00200	U	0.0996	0.09839		mg/Kg		99	70 - 130	10	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	118		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

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

Lab Sample ID: LCS 880-63115/2-A

Matrix: Solid

Analysis Batch: 63132

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 63115

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	726.2		mg/Kg		73	70 - 130
Diesel Range Organics (Over C10-C28)	1000	892.4		mg/Kg		89	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
1-Chlorooctane	132	S1+	70 - 130
o-Terphenyl	138	S1+	70 - 130

Lab Sample ID: LCSD 880-63115/3-A

Matrix: Solid

Analysis Batch: 63132

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 63115

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	832.8		mg/Kg		83	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	1000	976.0		mg/Kg		98	70 - 130	9	20

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QC Sample Results

Client: Ensolum
 Project/Site: Perla Verde 31 State Battery

Job ID: 890-5310-1
 SDG: 03C1558272

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

Lab Sample ID: LCSD 880-63115/3-A
 Matrix: Solid
 Analysis Batch: 63132

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 63115

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

Lab Sample ID: 890-5310-1 MS
 Matrix: Solid
 Analysis Batch: 63132

Client Sample ID: SS01
 Prep Type: Total/NA
 Prep Batch: 63115

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1010	713.8		mg/Kg		71	70 - 130
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	725.5		mg/Kg		72	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	81		70 - 130						
o-Terphenyl	71		70 - 130						

Lab Sample ID: 890-5310-1 MSD
 Matrix: Solid
 Analysis Batch: 63132

Client Sample ID: SS01
 Prep Type: Total/NA
 Prep Batch: 63115

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	1010	709.5		mg/Kg		70	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	712.9		mg/Kg		71	70 - 130	2	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	79		70 - 130								
o-Terphenyl	69	S1-	70 - 130								

Method: 8015B NM - Diesel Range Organics (DRO) (GC) - IN3

Lab Sample ID: MB 880-63115/1-A
 Matrix: Solid
 Analysis Batch: 63132

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 63115

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10 - IN3	<50.0	U	50.0	mg/Kg		09/22/23 17:09	09/23/23 08:04	1
Diesel Range Organics (Over C10-C28) - IN3	<50.0	U	50.0	mg/Kg		09/22/23 17:09	09/23/23 08:04	1
Oil Range Organics (Over C28-C36) - IN3	<50.0	U	50.0	mg/Kg		09/22/23 17:09	09/23/23 08:04	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane - IN3	111		70 - 130			09/22/23 17:09	09/23/23 08:04	1
o-Terphenyl - IN3	111		70 - 130			09/22/23 17:09	09/23/23 08:04	1

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QC Sample Results

Client: Ensolum
 Project/Site: Perla Verde 31 State Battery

Job ID: 890-5310-1
 SDG: 03C1558272

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-63064/1-A
 Matrix: Solid
 Analysis Batch: 63234

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			09/25/23 19:25	1

Lab Sample ID: LCS 880-63064/2-A
 Matrix: Solid
 Analysis Batch: 63234

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	246.2		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-63064/3-A
 Matrix: Solid
 Analysis Batch: 63234

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	246.5		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-5310-1 MS
 Matrix: Solid
 Analysis Batch: 63234

Client Sample ID: SS01
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	167	F1	252	383.5	F1	mg/Kg		86	90 - 110

Lab Sample ID: 890-5310-1 MSD
 Matrix: Solid
 Analysis Batch: 63234

Client Sample ID: SS01
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	167	F1	252	383.4	F1	mg/Kg		86	90 - 110	0	20

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QC Association Summary

Client: Ensolum
Project/Site: Perla Verde 31 State BatteryJob ID: 890-5310-1
SDG: 03C1558272

GC VOA

Prep Batch: 63016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5310-1	SS01	Total/NA	Solid	5035	
890-5310-2	SS02	Total/NA	Solid	5035	
890-5310-3	SS03	Total/NA	Solid	5035	
890-5310-4	SS04	Total/NA	Solid	5035	
MB 880-63016/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-63016/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-63016/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-33489-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-33489-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 63041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5310-1	SS01	Total/NA	Solid	8021B	63016
890-5310-2	SS02	Total/NA	Solid	8021B	63016
890-5310-3	SS03	Total/NA	Solid	8021B	63016
890-5310-4	SS04	Total/NA	Solid	8021B	63016
MB 880-63016/5-A	Method Blank	Total/NA	Solid	8021B	63016
LCS 880-63016/1-A	Lab Control Sample	Total/NA	Solid	8021B	63016
LCSD 880-63016/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	63016
880-33489-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	63016
880-33489-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	63016

Analysis Batch: 63112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5310-1	SS01	Total/NA	Solid	Total BTEX	
890-5310-2	SS02	Total/NA	Solid	Total BTEX	
890-5310-3	SS03	Total/NA	Solid	Total BTEX	
890-5310-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 63115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5310-1	SS01	Total/NA	Solid	8015NM Prep	
890-5310-2	SS02	Total/NA	Solid	8015NM Prep	
890-5310-3	SS03	Total/NA	Solid	8015NM Prep	
890-5310-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-63115/1-A - IN3	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-63115/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-63115/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5310-1 MS	SS01	Total/NA	Solid	8015NM Prep	
890-5310-1 MSD	SS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 63132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5310-1	SS01	Total/NA	Solid	8015B NM	63115
890-5310-2	SS02	Total/NA	Solid	8015B NM	63115
890-5310-3	SS03	Total/NA	Solid	8015B NM	63115
890-5310-4	SS04	Total/NA	Solid	8015B NM	63115
MB 880-63115/1-A - IN3	Method Blank	Total/NA	Solid	8015B NM	63115
LCS 880-63115/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	63115

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QC Association Summary

Client: Ensolum
Project/Site: Perla Verde 31 State BatteryJob ID: 890-5310-1
SDG: 03C1558272

GC Semi VOA (Continued)

Analysis Batch: 63132 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-63115/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	63115
890-5310-1 MS	SS01	Total/NA	Solid	8015B NM	63115
890-5310-1 MSD	SS01	Total/NA	Solid	8015B NM	63115

Analysis Batch: 63157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5310-1	SS01	Total/NA	Solid	8015 NM	
890-5310-2	SS02	Total/NA	Solid	8015 NM	
890-5310-3	SS03	Total/NA	Solid	8015 NM	
890-5310-4	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 63064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5310-1	SS01	Soluble	Solid	DI Leach	
890-5310-2	SS02	Soluble	Solid	DI Leach	
890-5310-3	SS03	Soluble	Solid	DI Leach	
890-5310-4	SS04	Soluble	Solid	DI Leach	
MB 880-63064/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-63064/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-63064/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5310-1 MS	SS01	Soluble	Solid	DI Leach	
890-5310-1 MSD	SS01	Soluble	Solid	DI Leach	

Analysis Batch: 63234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5310-1	SS01	Soluble	Solid	300.0	63064
890-5310-2	SS02	Soluble	Solid	300.0	63064
890-5310-3	SS03	Soluble	Solid	300.0	63064
890-5310-4	SS04	Soluble	Solid	300.0	63064
MB 880-63064/1-A	Method Blank	Soluble	Solid	300.0	63064
LCS 880-63064/2-A	Lab Control Sample	Soluble	Solid	300.0	63064
LCSD 880-63064/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	63064
890-5310-1 MS	SS01	Soluble	Solid	300.0	63064
890-5310-1 MSD	SS01	Soluble	Solid	300.0	63064

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Lab Chronicle

Client: Ensolum
Project/Site: Perla Verde 31 State Battery

Job ID: 890-5310-1
SDG: 03C1558272

Client Sample ID: SS01

Date Collected: 09/19/23 11:22

Date Received: 09/20/23 16:04

Lab Sample ID: 890-5310-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	63016	09/22/23 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63041	09/22/23 15:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63112	09/22/23 15:19	SM	EET MID
Total/NA	Analysis	8015 NM		1			63157	09/23/23 11:10	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	63115	09/22/23 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	63132	09/23/23 11:10	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	63064	09/22/23 11:15	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63234	09/25/23 19:43	CH	EET MID

Client Sample ID: SS02

Date Collected: 09/19/23 10:48

Date Received: 09/20/23 16:04

Lab Sample ID: 890-5310-2

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			4.98 g	5 mL	63016	09/22/23 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63041	09/22/23 15:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63112	09/22/23 15:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			63157	09/23/23 12:14	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	63115	09/22/23 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	63132	09/23/23 12:14	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	63064	09/22/23 11:15	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63234	09/25/23 20:00	CH	EET MID

Client Sample ID: SS03

Date Collected: 09/19/23 10:41

Date Received: 09/20/23 16:04

Lab Sample ID: 890-5310-3

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			5.02 g	5 mL	63016	09/22/23 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63041	09/22/23 17:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63112	09/22/23 17:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			63157	09/23/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	63115	09/22/23 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	63132	09/23/23 12:35	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	63064	09/22/23 11:15	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63234	09/25/23 20:06	CH	EET MID

Client Sample ID: SS04

Date Collected: 09/19/23 10:38

Date Received: 09/20/23 16:04

Lab Sample ID: 890-5310-4

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			5.03 g	5 mL	63016	09/22/23 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63041	09/22/23 17:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63112	09/22/23 17:23	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: Perla Verde 31 State Battery

Job ID: 890-5310-1
SDG: 03C1558272

Client Sample ID: SS04
Date Collected: 09/19/23 10:38
Date Received: 09/20/23 16:04

Lab Sample ID: 890-5310-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			63157	09/23/23 12:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	63115	09/22/23 17:09	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	63132	09/23/23 12:56	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	63064	09/22/23 11:15	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63234	09/25/23 20:12	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: Perla Verde 31 State Battery

Job ID: 890-5310-1
SDG: 03C1558272

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

Method Summary

Client: Ensolum
Project/Site: Perla Verde 31 State Battery

Job ID: 890-5310-1
SDG: 03C1558272

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

Eurofins Carlsbad

Sample Summary

Client: Ensolum
Project/Site: Perla Verde 31 State Battery

Job ID: 890-5310-1
SDG: 03C1558272

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5310-1	SS01	Solid	09/19/23 11:22	09/20/23 16:04	0.5'
890-5310-2	SS02	Solid	09/19/23 10:48	09/20/23 16:04	0.5'
890-5310-3	SS03	Solid	09/19/23 10:41	09/20/23 16:04	0.5'
890-5310-4	SS04	Solid	09/19/23 10:38	09/20/23 16:04	0.5'

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Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Environment Testing
Xenco



Work Order No: _____

www.xenco.com

Page 1 of 1

Project Manager:	Bill to: (if different)	Company Name:	Address:	City, State ZIP:	Phone:
Ben Belill		Enxco LLC	3122 National Parks Hwy	Carlsbad, NM, 88220	989-854-0852
Company Name:	Company Name:	Company Name:	Company Name:	Company Name:	Company Name:
Enxco LLC	Enxco LLC	Enxco LLC	Enxco LLC	Enxco LLC	Enxco LLC
Address:	Address:	Address:	Address:	Address:	Address:
3122 National Parks Hwy	3122 National Parks Hwy	3122 National Parks Hwy	3122 National Parks Hwy	3122 National Parks Hwy	3122 National Parks Hwy
City, State ZIP:	City, State ZIP:	City, State ZIP:	City, State ZIP:	City, State ZIP:	City, State ZIP:
Carlsbad, NM, 88220	Carlsbad, NM, 88220	Carlsbad, NM, 88220	Carlsbad, NM, 88220	Carlsbad, NM, 88220	Carlsbad, NM, 88220
Phone:	Phone:	Phone:	Phone:	Phone:	Phone:
989-854-0852	989-854-0852	989-854-0852	989-854-0852	989-854-0852	989-854-0852

Project Name:	Turn Around	Pres. Code	Parameters	# of Cont	Grab/Comp	Depth	Time Sampled	Date Sampled	Matrix	Sample Identification
Enxco LLC	9/12/23			1	G	0.5'	11:22	9/19/23	S	S501
3122 National Parks Hwy				1	G	0.5'	10:48		S	S502
Carlsbad, NM, 88220				1	G	0.5'	10:41		S	S503
989-854-0852				1	G	0.5'	10:38		S	S504

Project Number:	Due Date:	TAT starts the day received by the lab, if received by 4:30pm	Temp Blank:	Yes	No	Thermometer ID:	Correction Factor:	Temperature Reading:	Corrected Temperature:
03C1558272	9/12/23		Yes	No	0.2	-0.2	-0.2	-0.2	-0.2
Project Location:	Due Date:	TAT starts the day received by the lab, if received by 4:30pm	Temp Blank:	Yes	No	Thermometer ID:	Correction Factor:	Temperature Reading:	Corrected Temperature:
3122 National Parks Hwy	9/12/23		Yes	No	0.2	-0.2	-0.2	-0.2	-0.2
City, State ZIP:	Due Date:	TAT starts the day received by the lab, if received by 4:30pm	Temp Blank:	Yes	No	Thermometer ID:	Correction Factor:	Temperature Reading:	Corrected Temperature:
Carlsbad, NM, 88220	9/12/23		Yes	No	0.2	-0.2	-0.2	-0.2	-0.2
Phone:	Due Date:	TAT starts the day received by the lab, if received by 4:30pm	Temp Blank:	Yes	No	Thermometer ID:	Correction Factor:	Temperature Reading:	Corrected Temperature:
989-854-0852	9/12/23		Yes	No	0.2	-0.2	-0.2	-0.2	-0.2

Project Name:	Turn Around	Pres. Code	Parameters	# of Cont	Grab/Comp	Depth	Time Sampled	Date Sampled	Matrix	Sample Identification
Enxco LLC	9/12/23			1	G	0.5'	11:22	9/19/23	S	S501
3122 National Parks Hwy				1	G	0.5'	10:48		S	S502
Carlsbad, NM, 88220				1	G	0.5'	10:41		S	S503
989-854-0852				1	G	0.5'	10:38		S	S504

Project Name:	Turn Around	Pres. Code	Parameters	# of Cont	Grab/Comp	Depth	Time Sampled	Date Sampled	Matrix	Sample Identification
Enxco LLC	9/12/23			1	G	0.5'	11:22	9/19/23	S	S501
3122 National Parks Hwy				1	G	0.5'	10:48		S	S502
Carlsbad, NM, 88220				1	G	0.5'	10:41		S	S503
989-854-0852				1	G	0.5'	10:38		S	S504

Project Name:	Turn Around	Pres. Code	Parameters	# of Cont	Grab/Comp	Depth	Time Sampled	Date Sampled	Matrix	Sample Identification
Enxco LLC	9/12/23			1	G	0.5'	11:22	9/19/23	S	S501
3122 National Parks Hwy				1	G	0.5'	10:48		S	S502
Carlsbad, NM, 88220				1	G	0.5'	10:41		S	S503
989-854-0852				1	G	0.5'	10:38		S	S504

Project Name:	Turn Around	Pres. Code	Parameters	# of Cont	Grab/Comp	Depth	Time Sampled	Date Sampled	Matrix	Sample Identification
Enxco LLC	9/12/23			1	G	0.5'	11:22	9/19/23	S	S501
3122 National Parks Hwy				1	G	0.5'	10:48		S	S502
Carlsbad, NM, 88220				1	G	0.5'	10:41		S	S503
989-854-0852				1	G	0.5'	10:38		S	S504

Project Name:	Turn Around	Pres. Code	Parameters	# of Cont	Grab/Comp	Depth	Time Sampled	Date Sampled	Matrix	Sample Identification
Enxco LLC	9/12/23			1	G	0.5'	11:22	9/19/23	S	S501
3122 National Parks Hwy				1	G	0.5'	10:48		S	S502
Carlsbad, NM, 88220				1	G	0.5'	10:41		S	S503
989-854-0852				1	G	0.5'	10:38		S	S504

Revised Date: 08-25-2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5310-1

SDG Number: 03C1558272

Login Number: 5310

List Number: 1

Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5310-1

SDG Number: 03C1558272

Login Number: 5310

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 09/22/23 10:54 AM

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



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 10/11/2023 8:44:47 AM Revision 1

JOB DESCRIPTION

PERLA VERDE 31 STATE BATTERY
SDG NUMBER 03C1558272

JOB NUMBER

890-5374-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

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

Authorization



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

Generated
10/11/2023 8:44:47 AM
Revision 1

Client: Ensolum
Project/Site: PERLA VERDE 31 STATE BATTERY

Laboratory Job ID: 890-5374-1
SDG: 03C1558272

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Definitions/Glossary

Client: Ensolum
Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
SDG: 03C1558272

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Eurofins Carlsbad

Case Narrative

Client: Ensolum
Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
SDG: 03C1558272

Job ID: 890-5374-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5374-1

REVISION

The report being provided is a revision of the original report sent on 10/10/2023. The report (revision 1) is being revised due to Per client email, requesting sample depth correction.

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 9/29/2023 12:28 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BH01 (890-5374-1) and BH01A (890-5374-2).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-63929 and analytical batch 880-64194 was outside the control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH01 (890-5374-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-63769 and analytical batch 880-63710 was outside the upper control limits.

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

HPLC/IC

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

Client Sample Results

Client: Ensolum
 Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
 SDG: 03C1558272

Client Sample ID: BH01

Lab Sample ID: 890-5374-1

Date Collected: 09/29/23 11:10

Matrix: Solid

Date Received: 09/29/23 12:28

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/04/23 09:20	10/09/23 18:55	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/04/23 09:20	10/09/23 18:55	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/04/23 09:20	10/09/23 18:55	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/04/23 09:20	10/09/23 18:55	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/04/23 09:20	10/09/23 18:55	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/04/23 09:20	10/09/23 18:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130	10/04/23 09:20	10/09/23 18:55	1
1,4-Difluorobenzene (Surr)	117		70 - 130	10/04/23 09:20	10/09/23 18:55	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/09/23 18:55	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			10/03/23 02:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	mg/Kg		10/02/23 15:31	10/03/23 02:26	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		10/02/23 15:31	10/03/23 02:26	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		10/02/23 15:31	10/03/23 02:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130	10/02/23 15:31	10/03/23 02:26	1
o-Terphenyl	98		70 - 130	10/02/23 15:31	10/03/23 02:26	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	176		5.05	mg/Kg			10/05/23 04:13	1

Client Sample ID: BH01A

Lab Sample ID: 890-5374-2

Date Collected: 09/29/23 11:15

Matrix: Solid

Date Received: 09/29/23 12:28

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		10/04/23 09:20	10/09/23 19:20	1
Toluene	<0.00198	U	0.00198	mg/Kg		10/04/23 09:20	10/09/23 19:20	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		10/04/23 09:20	10/09/23 19:20	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		10/04/23 09:20	10/09/23 19:20	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		10/04/23 09:20	10/09/23 19:20	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		10/04/23 09:20	10/09/23 19:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	10/04/23 09:20	10/09/23 19:20	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
 Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
 SDG: 03C1558272

Client Sample ID: BH01A

Lab Sample ID: 890-5374-2

Date Collected: 09/29/23 11:15

Matrix: Solid

Date Received: 09/29/23 12:28

Sample Depth: 1'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	103		70 - 130	10/04/23 09:20	10/09/23 19:20	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			10/09/23 19:20	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			10/03/23 02:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	mg/Kg		10/02/23 15:31	10/03/23 02:47	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		10/02/23 15:31	10/03/23 02:47	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		10/02/23 15:31	10/03/23 02:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130			10/02/23 15:31	10/03/23 02:47	1
o-Terphenyl	98		70 - 130			10/02/23 15:31	10/03/23 02:47	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		5.02	mg/Kg			10/05/23 04:33	1

Eurofins Carlsbad

Surrogate Summary

Client: Ensolum
Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
SDG: 03C1558272

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-5374-1	BH01	138 S1+	117
890-5374-2	BH01A	114	103
890-5379-A-1-E MS	Matrix Spike	111	91
890-5379-A-1-F MSD	Matrix Spike Duplicate	104	94
LCS 880-63929/1-A	Lab Control Sample	116	109
LCSD 880-63929/2-A	Lab Control Sample Dup	110	104
MB 880-63929/5-A	Method Blank	66 S1-	95
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-5373-A-1-H MS	Matrix Spike	113	87
890-5373-A-1-I MSD	Matrix Spike Duplicate	115	89
890-5374-1	BH01	118	98
890-5374-2	BH01A	115	98
LCS 880-63769/2-A	Lab Control Sample	108	114
LCSD 880-63769/3-A	Lab Control Sample Dup	110	110
MB 880-63769/1-A	Method Blank	165 S1+	150 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
 Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
 SDG: 03C1558272

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-63929/5-A

Matrix: Solid

Analysis Batch: 64194

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 63929

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/04/23 09:20	10/09/23 12:21	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/04/23 09:20	10/09/23 12:21	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/04/23 09:20	10/09/23 12:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/04/23 09:20	10/09/23 12:21	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/04/23 09:20	10/09/23 12:21	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/04/23 09:20	10/09/23 12:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	66	S1-	70 - 130	10/04/23 09:20	10/09/23 12:21	1
1,4-Difluorobenzene (Surr)	95		70 - 130	10/04/23 09:20	10/09/23 12:21	1

Lab Sample ID: LCS 880-63929/1-A

Matrix: Solid

Analysis Batch: 64194

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 63929

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1106		mg/Kg		111	70 - 130
Toluene	0.100	0.1155		mg/Kg		115	70 - 130
Ethylbenzene	0.100	0.1144		mg/Kg		114	70 - 130
m-Xylene & p-Xylene	0.200	0.2234		mg/Kg		112	70 - 130
o-Xylene	0.100	0.1117		mg/Kg		112	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	116		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: LCSD 880-63929/2-A

Matrix: Solid

Analysis Batch: 64194

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 63929

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1087		mg/Kg		109	70 - 130	2	35
Toluene	0.100	0.1091		mg/Kg		109	70 - 130	6	35
Ethylbenzene	0.100	0.1023		mg/Kg		102	70 - 130	11	35
m-Xylene & p-Xylene	0.200	0.2050		mg/Kg		102	70 - 130	9	35
o-Xylene	0.100	0.1114		mg/Kg		111	70 - 130	0	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 890-5379-A-1-E MS

Matrix: Solid

Analysis Batch: 64194

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 63929

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0998	0.09173		mg/Kg		92	70 - 130
Toluene	<0.00199	U	0.0998	0.1103		mg/Kg		111	70 - 130

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QC Sample Results

Client: Ensolum
 Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
 SDG: 03C1558272

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

Lab Sample ID: 890-5379-A-1-E MS

Matrix: Solid

Analysis Batch: 64194

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 63929

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0998	0.1020		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1985		mg/Kg		99	70 - 130
o-Xylene	<0.00199	U	0.0998	0.1027		mg/Kg		103	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 890-5379-A-1-F MSD

Matrix: Solid

Analysis Batch: 64194

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 63929

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.1114		mg/Kg		111	70 - 130	19	35
Toluene	<0.00199	U	0.100	0.1111		mg/Kg		111	70 - 130	1	35
Ethylbenzene	<0.00199	U	0.100	0.1050		mg/Kg		105	70 - 130	3	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.2020		mg/Kg		101	70 - 130	2	35
o-Xylene	<0.00199	U	0.100	0.1001		mg/Kg		100	70 - 130	3	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

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

Lab Sample ID: MB 880-63769/1-A

Matrix: Solid

Analysis Batch: 63710

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 63769

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/02/23 15:31	10/02/23 19:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/02/23 15:31	10/02/23 19:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/02/23 15:31	10/02/23 19:53	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	165	S1+	70 - 130	10/02/23 15:31	10/02/23 19:53	1
o-Terphenyl	150	S1+	70 - 130	10/02/23 15:31	10/02/23 19:53	1

Lab Sample ID: LCS 880-63769/2-A

Matrix: Solid

Analysis Batch: 63710

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 63769

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	994.5		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	1000	962.2		mg/Kg		96	70 - 130

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QC Sample Results

Client: Ensolum
 Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
 SDG: 03C1558272

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

Lab Sample ID: LCS 880-63769/2-A
 Matrix: Solid
 Analysis Batch: 63710

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 63769

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: LCSD 880-63769/3-A
 Matrix: Solid
 Analysis Batch: 63710

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 63769

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	987.9		mg/Kg		99	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	949.4		mg/Kg		95	70 - 130	1	20
Surrogate		LCSD	LCSD								
	%Recovery	Qualifier	Limits								
1-Chlorooctane	110		70 - 130								
o-Terphenyl	110		70 - 130								

Lab Sample ID: 890-5373-A-1-H MS
 Matrix: Solid
 Analysis Batch: 63710

Client Sample ID: Matrix Spike
 Prep Type: Total/NA
 Prep Batch: 63769

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	994	845.6		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.4	U	994	1090		mg/Kg		108	70 - 130		
Surrogate		MS	MS								
	%Recovery	Qualifier	Limits								
1-Chlorooctane	113		70 - 130								
o-Terphenyl	87		70 - 130								

Lab Sample ID: 890-5373-A-1-I MSD
 Matrix: Solid
 Analysis Batch: 63710

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Total/NA
 Prep Batch: 63769

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	<50.4	U	994	871.5		mg/Kg		84	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.4	U	994	1119		mg/Kg		111	70 - 130	3	20
Surrogate		MSD	MSD								
	%Recovery	Qualifier	Limits								
1-Chlorooctane	115		70 - 130								
o-Terphenyl	89		70 - 130								

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QC Sample Results

Client: Ensolum
 Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
 SDG: 03C1558272

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-63731/1-A
 Matrix: Solid
 Analysis Batch: 63881

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			10/05/23 03:53	1

Lab Sample ID: LCS 880-63731/2-A
 Matrix: Solid
 Analysis Batch: 63881

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	241.1		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-63731/3-A
 Matrix: Solid
 Analysis Batch: 63881

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	240.9		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-5374-1 MS
 Matrix: Solid
 Analysis Batch: 63881

Client Sample ID: BH01
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	176		253	411.9		mg/Kg		93	90 - 110

Lab Sample ID: 890-5374-1 MSD
 Matrix: Solid
 Analysis Batch: 63881

Client Sample ID: BH01
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	176		253	413.3		mg/Kg		94	90 - 110	0	20

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QC Association Summary

Client: Ensolum
Project/Site: PERLA VERDE 31 STATE BATTERYJob ID: 890-5374-1
SDG: 03C1558272

GC VOA

Prep Batch: 63929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5374-1	BH01	Total/NA	Solid	5035	
890-5374-2	BH01A	Total/NA	Solid	5035	
MB 880-63929/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-63929/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-63929/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5379-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-5379-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 64194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5374-1	BH01	Total/NA	Solid	8021B	63929
890-5374-2	BH01A	Total/NA	Solid	8021B	63929
MB 880-63929/5-A	Method Blank	Total/NA	Solid	8021B	63929
LCS 880-63929/1-A	Lab Control Sample	Total/NA	Solid	8021B	63929
LCSD 880-63929/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	63929
890-5379-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	63929
890-5379-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	63929

Analysis Batch: 64387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5374-1	BH01	Total/NA	Solid	Total BTEX	
890-5374-2	BH01A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 63710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5374-1	BH01	Total/NA	Solid	8015B NM	63769
890-5374-2	BH01A	Total/NA	Solid	8015B NM	63769
MB 880-63769/1-A	Method Blank	Total/NA	Solid	8015B NM	63769
LCS 880-63769/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	63769
LCSD 880-63769/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	63769
890-5373-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	63769
890-5373-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	63769

Prep Batch: 63769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5374-1	BH01	Total/NA	Solid	8015NM Prep	
890-5374-2	BH01A	Total/NA	Solid	8015NM Prep	
MB 880-63769/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-63769/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-63769/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5373-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5373-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 63865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5374-1	BH01	Total/NA	Solid	8015 NM	
890-5374-2	BH01A	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Ensolum
Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
SDG: 03C1558272

HPLC/IC

Leach Batch: 63731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5374-1	BH01	Soluble	Solid	DI Leach	
890-5374-2	BH01A	Soluble	Solid	DI Leach	
MB 880-63731/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-63731/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-63731/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5374-1 MS	BH01	Soluble	Solid	DI Leach	
890-5374-1 MSD	BH01	Soluble	Solid	DI Leach	

Analysis Batch: 63881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5374-1	BH01	Soluble	Solid	300.0	63731
890-5374-2	BH01A	Soluble	Solid	300.0	63731
MB 880-63731/1-A	Method Blank	Soluble	Solid	300.0	63731
LCS 880-63731/2-A	Lab Control Sample	Soluble	Solid	300.0	63731
LCSD 880-63731/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	63731
890-5374-1 MS	BH01	Soluble	Solid	300.0	63731
890-5374-1 MSD	BH01	Soluble	Solid	300.0	63731

Lab Chronicle

Client: Ensolum
Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
SDG: 03C1558272

Client Sample ID: BH01

Date Collected: 09/29/23 11:10

Date Received: 09/29/23 12:28

Lab Sample ID: 890-5374-1

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	63929	10/04/23 09:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64194	10/09/23 18:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64387	10/09/23 18:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			63865	10/03/23 02:26	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	63769	10/02/23 15:31	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	63710	10/03/23 02:26	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	63731	10/02/23 11:14	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63881	10/05/23 04:13	CH	EET MID

Client Sample ID: BH01A

Date Collected: 09/29/23 11:15

Date Received: 09/29/23 12:28

Lab Sample ID: 890-5374-2

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			5.05 g	5 mL	63929	10/04/23 09:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64194	10/09/23 19:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64387	10/09/23 19:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			63865	10/03/23 02:47	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	63769	10/02/23 15:31	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	63710	10/03/23 02:47	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	63731	10/02/23 11:14	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63881	10/05/23 04:33	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
SDG: 03C1558272

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

Method Summary

Client: Ensolum
Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
SDG: 03C1558272

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

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Sample Summary

Client: Ensolum
Project/Site: PERLA VERDE 31 STATE BATTERY

Job ID: 890-5374-1
SDG: 03C1558272

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5374-1	BH01	Solid	09/29/23 11:10	09/29/23 12:28	0.5'
890-5374-2	BH01A	Solid	09/29/23 11:15	09/29/23 12:28	1'

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



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Environment Testing

Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 784-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No:

Page 1 of 1
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Project Manager:	Ben Bevil	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
	800-884-0852	Email:	ben@ensolum.com

Work Order Comments	
Program: UST/PST <input type="checkbox"/> PAR <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/> State of Project: Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/> Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:	

Project Name:		PERLA VERDE 31 STATE BATTERY Turn Around		ANALYSIS REQUEST		Preservative Codes													
Project Number:		D3C1558272		Pres. Code		3: NO DI Water: H ₂ O													
Project Location:		32.61348, -103.49561		Due Date:		Cool MeOH: Me													
Sampler's Name:		Meredith Roberts		TAT starts the day received by the lab, if received by 4:30pm		+C HNO ₃ : HN													
PO #:						4: H ₂ NaOH: Na													
SAMPLE RECEIPT Temp Blank: Yes No Samples Received Intact: Yes No Cooler Custody Seals: Yes No Sample Custody Seals: Yes No Total Containers:				Wet Ice: Yes No Thermometer ID: <u>1110027</u> Correction Factor: <u>-0.2</u> Temperature Reading: <u>2.9</u> Corrected Temperature: <u>2.7</u>				4: HP 3: NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SACP											
Sample Identification BH01 BH01A				Date Sampled 9/29/23 1110 1115		Depth 0.5' 1'		Grab/Comp G ↓		# of Cont 1 ↓		Parameters BTEX Gases TPH		Incident #: NAPP232751480		Cost Center: 1073541001		Sample Comments 1073541001 mmbert@pensulum.com	

Total	200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Tl	Sn	U	V	Zn
Circle Method(s) and Metal(s) to be analyzed			TCLP / SPLP		6010 : 8RCRA	Sb	As	Ba	Be	Cd	Cr	Cu	Pb	Mn	Mo	Ni	Se	Ag	Tl	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
1	Pneakes	Sunny	9/29 1228			
3						

2006/06/06 08:00

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5374-1

SDG Number: 03C1558272

Login Number: 5374

List Number: 1

Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5374-1

SDG Number: 03C1558272

Login Number: 5374

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 10/02/23 08:46 AM

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



APPENDIX E

NMOCD Notifications

Collins, Melanie

From: Collins, Melanie
Sent: Wednesday, August 2, 2023 2:46 PM
To: ocd.enviro (ocd.enviro@emnrd.nm.gov); Hamlet, Robert, EMNRD (Robert.Hamlet@emnrd.nm.gov); Bratcher, Michael, EMNRD (mike.bratcher@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn.Harimon@emnrd.nm.gov)
Cc: DelawareSpills /SM; Green, Garrett J
Subject: 24-Hr notification Perla Verde 08/01/23

All,

This is notification of a spill greater than 25 barrels that occurred yesterday at the Perla Verde Battery location. GPS coordinates are listed below. Details will be provided with a Form C-141.

GPS 32.6134159,-103.4959108

Thank you,

Melanie Collins



Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

Green, Garrett J

From: Green, Garrett J
Sent: Friday, August 11, 2023 1:10 PM
To: 'Enviro, OCD, EMNRD'
Cc: DelawareSpills /SM
Subject: 48 Hour Liner Inspection Notification - Perla Verde Battery - Released on

Good afternoon,

This is sent as a 48-hour notification, XTO is scheduled to inspect the lined containment at Perla Verde 31 State Battery released on (8/1/2023), on Monday, August 14, 2023, at 1:30pm MST. A 24 hour release notification was sent out on Wednesday, August 2, 2023 2:46 PM since the release was greater than 25 barrels in volume. Please call us with any questions or concerns.

GPS Coordinates: (32.6134159,-103.4959108)

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From: [Rodgers, Scott, EMNRD](#)
To: [Green, Garrett J](#); [Bratcher, Michael, EMNRD](#); [Hamlet, Robert, EMNRD](#); [Velez, Nelson, EMNRD](#)
Cc: [Ben Belill](#); [DelawareSpills /SM](#); [Collins, Melanie](#)
Subject: RE: [EXTERNAL] XTO - Sampling Notification (Week of 9/25/23 - 9/29/23)
Date: Wednesday, September 20, 2023 5:41:28 PM

You don't often get email from scott.rodgers@emnrd.nm.gov. [Learn why this is important](#)

[**EXTERNAL EMAIL]**

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

Scott Rodgers • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
8801 Horizon Blvd. NE, Suite 260 | Albuquerque, NM 87113
505.469.1830 | scott.rodgers@emnrd.nm.gov
<http://www.emnrd.nm.gov/oed>



From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Wednesday, September 20, 2023 3:18 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Ben Belill <bbelill@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Collins, Melanie <melanie.collins@exxonmobil.com>
Subject: [EXTERNAL] XTO - Sampling Notification (Week of 9/25/23 - 9/29/23)

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

All,

XTO plans to complete final sampling activities at the sites listed below for the week of September 25, 2023.

Monday

- JRU 21 DI 9 Riser / NAPP2322141858
- Poker Lake Unit 301H / NAPP2322646789

Tuesday

- North Indian Flats 26 Fed 1 / nAPP2323653065
- Poker Lake Unit 301H / NAPP2322646789

Wednesday

- North Indian Flats 26 Fed 1 / nAPP2323653065
- BEU 70 / NAPP2318139530

Thursday

- PLU 15 Twin Wells Ranch CTB / Napp2323449490
- Perla Verde 31 State Battery / nAPP2322751480 (SLO)

Thank you,

Garrett Green

Environmental Coordinator

Delaware Business Unit

(575) 200-0729

Garrett.Green@ExxonMobil.com

XTO Energy, Inc.

3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 281053

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 281053
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Liner inspection approved. Release resolved.	2/20/2024