ate of New Mexico

Incident ID	NAPP2202534347
District RP	
Facility ID	
Application ID	

## **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.				
<ul> <li>□ Detailed description of proposed remediation technique</li> <li>□ Scaled sitemap with GPS coordinates showing delineation points</li> <li>□ Estimated volume of material to be remediated</li> <li>□ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>□ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>				
Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation.				
⊠ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.				
Extents of contamination must be fully delineated.				
☑ Contamination does not cause an imminent risk to human health, the environment, or groundwater.				
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:  Adrian Baker  Title:  Environmental Coordinator				
Signature: Date:				
Email: adrian.baker@exxonmobil.com Telephone: 432-236-3808				
OCD Only				
Received by: Robert Hamlet Date: 5/18/2022				
☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved				
Signature: Robert Hamlet Date: 5/18/2022				

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 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	NAPP2202534347
District RP	
Facility ID	
Application ID	

### **Release Notification**

#### **Responsible Party**

Responsible Party				OGRID		
Contact Name			Contact Te	Contact Telephone		
Contact email				Incident #	(assigned by OCD	)
Contact mail	ing address			1		
			Location	of Release So	ource	
Latitude				Longitude _		
			(NAD 83 in dec	cimal degrees to 5 decin	nal places)	
Site Name				Site Type		
Date Release	Discovered			API# (if app	olicable)	
Unit Letter	Section	Township	Range	Coun	nty	
Surface Owner	r: State	□ Fadaral □ Tr	ribal 🔲 Private ( <i>I</i>	Nama:		
Surface Owner	i. State		iloai 🔲 Fiivate (i	vame		
			Nature and	l Volume of l	Release	
	Material	(s) Released (Select al	ll that annly and attach	calculations or specific	justification for th	e volumes provided below)
Crude Oil		Volume Release		carculations of specific	Volume Reco	
Produced	Water	Volume Release	ed (bbls)		Volume Recovered (bbls)	
		Is the concentrat	tion of total dissolv	ved solids (TDS)	Yes N	No
□ C - 1	4.		$\frac{\text{water} > 10,000 \text{ mg}}{1.0111}$	:/1?	V. I D.	1/11)
Condensa		Volume Release			Volume Recovered (bbls)	
Natural Gas Volume Released (Mcf)				Volume Reco	· · · ·	
Other (describe) Volume/Weight Released (provide unit			e units)	Volume/Wei	ght Recovered (provide units)	
G 07.1						
Cause of Rele	ease					

Received by OCD: 4/15/2022 3:06:38 PM State of New Mexico
Page 2 Oil Conservation Division

			-	- 4	•	-	N
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	0		2_			-/-	

Incident ID	NAPP2202534347
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the response	ble party consider this a major release?
Yes No		
If YES, was immediate no	otice given to the OCD? By whom? To who	m? When and by what means (phone, email, etc)?
	Initial Res	ponse
The responsible	party must undertake the following actions immediately t	nless they could create a safety hazard that would result in injury
☐ The source of the rele	ease has been stopped.	
	is been secured to protect human health and the	e environment.
Released materials ha	ave been contained via the use of berms or dik	es, absorbent pads, or other containment devices.
All free liquids and re	ecoverable materials have been removed and	nanaged appropriately.
If all the actions described	d above have <u>not</u> been undertaken, explain wh	y:
has begun, please attach	a narrative of actions to date. If remedial ef	nediation immediately after discovery of a release. If remediation forts have been successfully completed or if the release occurred ase attach all information needed for closure evaluation.
regulations all operators are public health or the environr failed to adequately investig	required to report and/or file certain release notific ment. The acceptance of a C-141 report by the OC ate and remediate contamination that pose a threat	st of my knowledge and understand that pursuant to OCD rules and ations and perform corrective actions for releases which may endanger D does not relieve the operator of liability should their operations have to groundwater, surface water, human health or the environment. In sponsibility for compliance with any other federal, state, or local laws
Printed Name:	$\mathcal{R}$	Title:
Signature: Udv	ian Bafus	Date:
email:		Telephone:
OCD Only		
Received by: Ramon	a Marcus	Date: _2//3/2022

Location:	PLU 158 Battery		
Spill Date:	1/15/2022		
	Area 1		
Approximate A	rea =	280.73	cu.ft.
	VOLUME OF LEAK		
Total Crude Oil	=	0.00	bbls
Total Produced	otal Produced Water = 50.00 bbl		bbls
	TOTAL VOLUME OF LEAK		
Total Crude Oil	=	0.00	bbls
Total Produced Water = 50.00		bbls	
	TOTAL VOLUME RECOVERED		
<b>Total Crude Oil</b>	=	0.00	bbls
Total Produced	Water =	50.00	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

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 74950

#### **CONDITIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	74950
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By		Condition Date
rmarcus	None	2/3/2022

Incident ID NAPP2202534347 District RP Facility ID Application ID

#### **Site Assessment/Characterization**

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

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

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.

X Laboratory data including chain of custody

X Topographic/Aerial maps

Received by OCD: 4/15/2022 3:06:38 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

	Page / 0f 103
Incident ID	NAPP2202534347
District RP	
Facility ID	

Application ID

I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the failed to adequately investigate and remediate contamination that pose a the addition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations.	otifications a e OCD does noted to ground	nd perform corrective actions for release not relieve the operator of liability shoul ndwater, surface water, human health or	es which may endanger d their operations have the environment. In
Printed Name: Adrian Baker	Title: Envi	ronmental Coordinator	
Signature:	Date:	04/15/2022	
email:_adrian.baker@exxonmobil.com	-	Telephone: <u>432-236-3808</u>	
OCD Only			
Received by:	_ 1	Date:	

Page 8 of 105

Incident ID	NAPP2202534347
District RP	
Facility ID	
Application ID	

### **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be	e included in the plan.
<ul> <li>□ Detailed description of proposed remediation technique</li> <li>□ Scaled sitemap with GPS coordinates showing delineation poin</li> <li>□ Estimated volume of material to be remediated</li> <li>□ Closure criteria is to Table 1 specifications subject to 19.15.29.</li> <li>□ Proposed schedule for remediation (note if remediation plan tires)</li> </ul>	12(C)(4) NMAC
Deferral Requests Only: Each of the following items must be co	nfirmed as part of any request for deferral of remediation.
	roduction equipment where remediation could cause a major facility
○ Contamination does not cause an imminent risk to human healt	h, the environment, or groundwater.
	e and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of
Signature:  Email: adrian.baker@exxonmobil.com	Date:
OCD Only	
Received by:	Date:
Approved	Approval
Signature:	<u>Date:</u>



April 15, 2022

District II New Mexico Oil Conservation Division 811 South First Street Artesia. New Mexico 88210

Re: Deferral Request Poker Lake Unit 158

Incident Number NAPP2202534347

**Eddy County, New Mexico** 

#### To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this Deferral Request to document site assessment and soil sampling activities at the Poker Lake Unit 158 (Site) in Unit A, Section 7, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of produced water within lined containment at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Deferral Request, describing site assessment and delineation activities that have occurred and requesting deferral of final remediation for Incident Number NAPP2202534347 until the Site is reconstructed, and/or the well pad is abandoned.

#### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Eddy County, New Mexico (32.23763° N, 103.91436°W) and is associated with oil and gas exploration and production operations on Bureau of Land Management (BLM) Federal Land.

On January 15, 2022, a valve and seal on the transfer pump malfunctioned, resulting in the release of approximately 50 barrels (bbls) of produced water into the lined tank battery containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; all 50 bbls of released produced water were recovered from within the lined containment. A 48-hour advance notice of liner inspection was provided via email to the New Mexico Oil Conservation Division (NMOCD) District II office. A liner integrity inspection was conducted by XTO personnel following fluid recovery. Upon inspection, the liner was determined to be insufficient. XTO reported the release to the NMOCD via email on January 18, 2022, and submitted a Release Notification Form C-141 (Form C-141) on January 25, 2022. The release was assigned Incident Number NAPP2202534347.

#### SITE CHARATERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC).

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 705 W. Wadley, Suite 210 | Midland, TX 78209 | ensolum.com Texas PG Firm No. 50588 | Texas PE Firm No. F-21843



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.

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On May 14, 2021, a soil boring (C-4526) was drilled nearly 0.5 miles of the Site utilizing a track-mounted hollow-stem auger rig. Soil boring C-4526 was drilled to a depth of 105 feet bgs. The location of the borehole is approximately 2,930 feet northwest of the release area and is depicted on Figure 1. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activites. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 105 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The Well Record and Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a riverine, located approximately 0.68 miles southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

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

#### SITE ASSESSMENT ACTIVITIES

On March 3, 2022 and March 30, 2022, Ensolum personnel visited the Site to evaluate the release extent and conduct site assessment activities. One borehole (BH01) was advanced via hand auger near the location of the tear in the liner to assess the vertical extent of impacted soil. Delineation soil samples were collected from borehole BH01 at depths ranging from 1-foot to 6 feet bgs. Four additional potholes (PH01 through PH04) were advanced via backhoe around the lined containment to confirm the lateral extent of the release. Discrete delineation soil samples were collected from each pothole at depths ranging from 1-foot to 5 feet bgs. Soil from the borehole and potholes was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations from the borehole and potholes were documented on lithologic/soil sampling logs, which are included as Appendix B. The borehole and potholes were backfilled with the soil removed and XTO repaired the tear in the liner. The delineation soil sample locations are depicted on Figure 2. Photographic documentation is included in Appendix C.



The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

#### LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from borehole BH01, indicated that TPH and/or TPH-DRO/TPH-GRO concentrations exceeded the Closure Criteria at depths ranging from 1-foot to 5 feet bgs, directly beneath the tear in the liner. Subsequent delineation sample BH01D, collected at 6 feet bgs, indicated that benzene, BTEX, TPH-DRO/TPH-GRO, TPH, and chloride concentrations were compliant with the Closure Criteria.

Laboratory analytical results for the delineation soil samples collected from potholes PH01 through PH04, collected at depths ranging from 1-foot to 5 feet bgs around the lined containment, indicated that benzene, BTEX, TPH-DRO/TPH-GRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

#### **DEFFERAL REQUEST**

XTO is requesting deferral of final remediation due to the presence of active production equipment and surface pipelines within the lined containment. The impacted soil is limited to the area immediately beneath the lined containment and active production equipment, where remediation would require a major facility deconstruction.

The impacted soil remaining in place beneath the liner is delineated vertically by delineation soil sample BH01D collected at 6 feet bgs and laterally by delineation soil samples from potholes PH01 through PH04. A maximum of 990 cubic yards of TPH impacted soil remains in place beneath the liner assuming a maximum 6-foot depth based on the delineation soil samples listed above, that were compliant with the Closure Criteria.

XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 100 feet bgs, the release was contained laterally by the lined containment, and the impacted soil remaining in place is limited to the area immediately beneath the liner. The liner has been repaired by XTO and will restrict future vertical migration of residual impacts.

Based on the presence of active production equipment within the release area and the complete lateral and vertical delineation of impacted soil remaining in place, XTO requests deferral of final remediation for Incident Number NAPP2202534347 until final reclamation of the well pad or major construction, whichever comes first.



If you have any questions or comments, please contact Ms. Aimee Cole at (720) 384-7365 or acole@ensolum.com.

Sincerely, **Ensolum**, **LLC** 

Kalei Jennings Senior Scientist Aimee Cole Senior Managing Scientist

Since Cale

cc: Adrian Baker, XTO

alui Jennings

Bureau of Land Management

#### Appendices:

Figure 1 Site Receptor Map

Figure 2 Delineation Soil Sample Locations
Table 1 Soil Sample Analytical Results
Appendix A Referenced Well Records
Appendix B Lithologic / Soil Sampling Logs

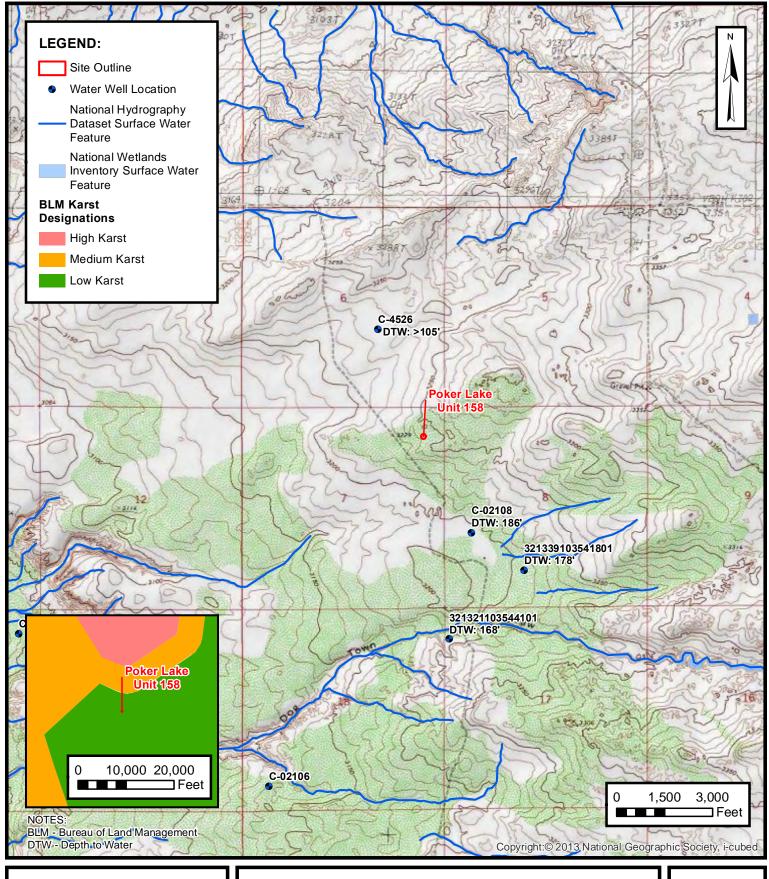
Appendix C Photographic Log

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

Appendix E NMOCD Notifications



**FIGURES** 

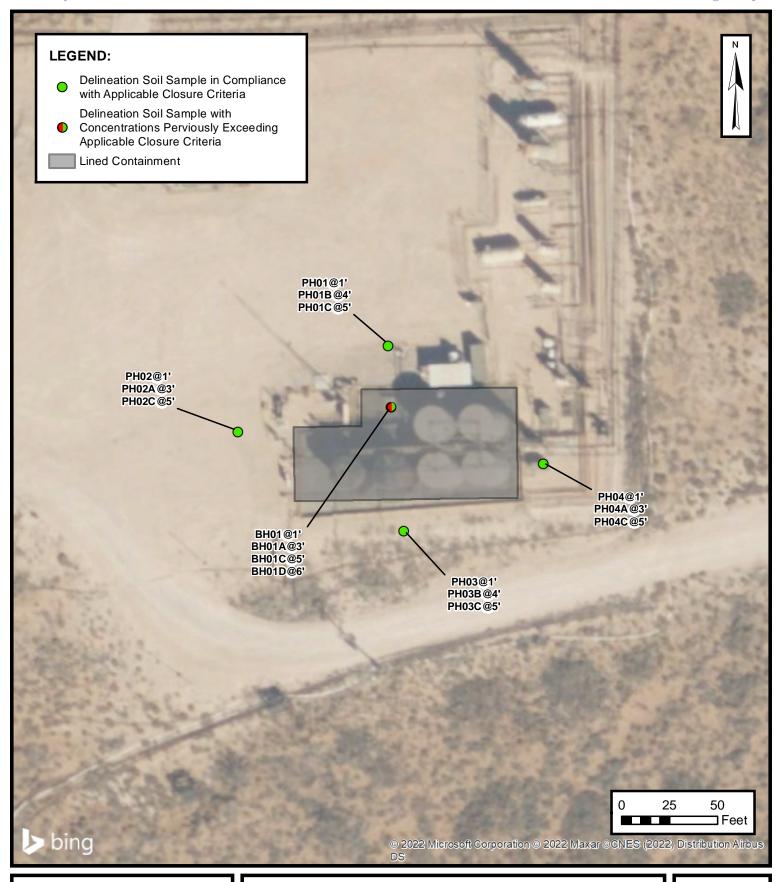




#### SITE RECEPTOR MAP

XTO ENERGY, INC POKER LAKE UNIT 158 Incident Number: NAPP2202534347 Unit A, Sec 07, T24S, R30E Eddy County, New Mexico **FIGURE** 

1





#### **DELINEATION SOIL SAMPLE LOCATIONS**

XTO ENERGY, INC POKER LAKE UNIT 158 Incident Number: NAPP2202534347 Unit A, Sec 07, T24S, R30E Eddy County, New Mexico FIGURE

2



**TABLES** 



## TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS XTO Energy, Inc. - Poker Lake Unit 158 Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
				Delineation S	Soil Sample Analyti	cal Results				
BH01	03/03/2022	1	< 0.00200	0.0372	<49.8	2,870	<49.8	2,870	2,870	479
BH01A	03/03/2022	3	< 0.00199	0.0175	78.7	4,900	< 50.0	4,980	4,980	1,240
BH01C	03/03/2022	5	< 0.00199	< 0.00398	< 50.0	2,030	< 50.0	2,030	2,030	2,670
BH01D	03/03/2022	6	< 0.00199	< 0.00398	<49.9	78.6	<49.9	78.6	78.6	3,120
PH01	03/30/2022	1	< 0.00200	< 0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	23.1
PH01B	03/30/2022	4	< 0.00199	< 0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	748
PH01C	03/30/2022	5	< 0.00198	< 0.00397	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	172
PH02	03/30/2022	1	< 0.00198	< 0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	117
PH02A	03/30/2022	3	< 0.00200	< 0.00401	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	218
PH02C	03/30/2022	5	< 0.00199	< 0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	60.0
PH03	03/30/2022	1	< 0.00200	< 0.00399	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	<4.97
PH03B	03/30/2022	4	< 0.00200	< 0.00399	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	666
PH03C	03/30/2022	5	< 0.00199	< 0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	278
PH04	03/30/2022	1	< 0.00198	< 0.00397	< 50.0	< 50.0	<50.0	< 50.0	< 50.0	<4.98
PH04A	03/30/2022	3	< 0.00199	< 0.00398	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 5.00
PH04C	03/30/2022	5	< 0.00199	< 0.00398	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 5.00

#### Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

TPH: Total Petroleum Hydrocarbon

Concentrations in bold exceed the NMOCD Table 1 Closure Criteria for Soils Impacted by a Release

Ensolum 1 of 1



**APPENDIX A** 

Referenced Well Records



2904 W 2nd St. Roswell, NM 88201 volce: 575.624.2420 fox: 575.624.2421 www.aikinseng.com

06/09/2021

DII-NMOSE 1900 W 2<sup>nd</sup> Street Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4526 Pod1

To whom it may concern:

Attached please find a well record and a plugging record, in duplicate, for a one (1) soil borings, C-4526 Pod1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

Lucas Middleton

Enclosures: as noted above

Gran Whodolin

012 07 00 pic 2021 202 27

PAGE 1 OF 2

WELL TAG ID NO.



	OSE POD NO.		)		WELL TAG ID NO	).			LE NO(	S).				
ON	POD1 (M	W-1)		1	n/a			C-452	26					
AT.	WELL OWNE							PHON	E (OPTI	ONAL)				
3	XTO Energ													
T	WELL OWNE 6401 Holid							CITY Midla	nd		STATE	: 79707	ZIP	
WE	0401 Hond	ay IIII Di						IVIIGIA	ing.		17	17101		
g	WELL		DE	GREES 32°	MINUTES 14'	SECO	NDS 15"							
AL.	LOCATIO	1471	TTUDE				N	ACCURACY REQUIRED: ONE TENTH OF A SECOND						
GENERAL AND WELL LOCATION	(FROM GP	S) LON	IGITUDE	103°	55'	6.2	20" W	* DA1	UM KEU	QUIRED: WGS 84				
B	DESCRIPTIO	N RELATIN	G WELL LOCATION TO	STREET ADDRE	SS AND COMMO	N LANDM	IARKS – PLS	\$ (SECT	ION, TO	WNSHJIP, RANGE) WH	ERE AV	AILABLE		
1	NW NE Se	c. 06 T24	S R30E											
	LICENSE NO.		NAME OF LICENSED	DRILLER						NAME OF WELL DRI	LLING (	COMPANY		
	124	9		Ja	ackie D. Atkins	S				Atkins Eng	ineering	g Associates, I	nc.	
	DRILLING ST		DRILLING ENDED		PLETED WELL (F	•	BORE HO		H (FT)	DEPTH WATER FIRS				
	05/14/2	2021	05/14/2021	tempora	ary well materi	ıaı		105			n/a			
	COMPLETED	WELL IS:	ARTESIAN	✓ DRY HOLE	SHALL	OW (UNC	ONFINED)			STATIC WATER LEV	EL IN C		LL (FT)	
2. DRILLING & CASING INFORMATION	DRILLING FI	LIID:	✓ AIR	MUD	ADDITI	VES – SPE	CIFY:							
MA.	DRILLING M		ROTARY	HAMMER	CABLE	TOOL	7 отне	R – SPEC	CIFY:	Hollo	w Sten	n Auger		
FOR														
Z	DEPTH (	(feet bgi)	BORE HOLE	CASING	MATERIAL AN GRADE	D/OK		ASING NECTIO	NA.	CASING INSIDE DIAM.		ING WALL	SLOT SIZE	
SIN	FROM	10	DIAM (inches)		ach casing string		Т Т	YPE		(inches)	ľ	(inches)	(inches)	
CAS	0	105	±6.5		ections of screen Boring- HSA	1)	(add coup	ling diam	neter)					
S S		105							_					
CIN														
RIL														
2. D														
											L		L	
	DEPTH (	(feet bgl)	BORE HOLE	1	T ANNULAR S					AMOUNT		метно		
FROM TO DIAM. (inches) GRAVEL PACK SIZE-RANGE BY										(cubic feet)		PLACEN	IENT	
TER											_			
MA											_			
AR							_							
ANNULAR MATERIAL											-+			
3. AN											-			
60											_			
EOP	One Dance.	NIAT TIOP		<del></del>					W/D 2	0 WELL RECORD	e i oc	Marsion 06/2	0/17)	
	OSE INTER E NO.	MAL USE			POD N	O.	-	$\neg$	TRN 1		r LOG	A crainti nol 2	5,11)	

LOCATION

	DEPTH (f	eet bgl)		GOLOB AND	D TSOR OF MATERIAL E	NICOLINI	repen		THE PERSON	ESTIMATED
			THICKNESS		D TYPE OF MATERIAL E R-BEARING CAVITIES O			s	WATER BEARING?	YIELD FOR WATER-
	FROM	TO	(feet)	(attach sup	plemental sheets to fully do	escribe a	ll units)		(YES/NO)	BEARING ZONES (gpm)
	0	4	4	SAND, poorly	graded, fine-very grained, I	Reddish-l	orown, dry		Y ✓N	
	4	12	8	CALICHE,	poorly-mod. consolidated, t	an-off wl	nite, dry		Y ✓N	
	12	19	7	SAND, poorly grad	ded, fine-very grained, some	caliche g	gravel, Tan ,dı	у	Y ✓N	
	19	24	5	SAND, poorly graded,	fine-very grained, some cali	che grave	el, Light- Brov	vn, dry	y √n	
	24	72	48	SAND, poorly	graded, fine-very grained, R	eddish B	rown, moist		Y ✓N	
ᅧ	72	92	20	SAND, poorly grade	oist	Y ✓N				
4. HYDROGEOLOGIC LOG OF WELL	92	102	10	SILTY SAND, poo	orly graded, fine-very grained	d, Reddis	h Brown, moi	st	Y ✓N	
Q.	102	105	3	SILTY SAND, po	orly graded, fine-very grains	ed, Reddi	sh Brown, dr	7	y √n	
90									Y N	
ICI									Y N	
9									Y N	
(E)									y N	
ROC									Y N	
2									Y N	
4								î	Y N	
									y N	
									Y N	
									Y N	
									Y N	
									Y N	
									Y N	
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARING	G STRATA:			TOT	AL ESTIMATED	
	PUMI	A	IR LIFT	BAILER OT	HER – SPECIFY:			WEI	L YIELD (gpm):	0.00
z	WELL TES	TEST :	RESULTS - ATT	ACH A COPY OF DAT ME, AND A TABLE SH	A COLLECTED DURING HOWING DISCHARGE AN	WELL T D DRAV	ESTING, INC	CLUDE ER TH	NG DISCHARGE I	METHOD, DD.
VISION	MISCELLA									
	MISCELLA	NEOUS INF	Te	emporary well materia	als removed and the soil b	oring ba	ackfilled usi from ten fe	ng dril et belo	l cuttings from to w ground surface	tal depth to ten
SUP			L	ogs adapted from WSI	P on-site geologist.	onpo			6	
RIG							<u> </u>	<b>3E</b> 07	T JUN 10 202	242.7
TEST; RIG SUPER	DRINT NAM	E(S) OF D	III I RIG SIIDEE	VISOR(S) THAT PRO	VIDED ONSITE SUPERVI	SION OF	WELL CON	STRU	CTION OTHER T	IAN LICENSEE:
5. T					A COLUMN	J. J. 1 OI	,, 200		O II	
	Shane Ekin	ige, Carille	lo Trevino, Can	IIVIVII I IUIU						
URE	CORRECT F	RECORD OF	F THE ABOVE I	DESCRIBED HOLE AN	EST OF HIS OR HER KNO D THAT HE OR SHE WIL PLETION OF WELL DRILI	L FILE 1	GE AND BEL THIS WELL I	IEF, T	HE FOREGOING D WITH THE ST	IS A TRUE AND ATE ENGINEER
SIGNATURE	Jack A				ckie D. Atkins				06/09/2021	
6. S	·	SIGNAT	URE OF DRILLE	ER / PRINT SIGNEE 1	NAME				DATE	
	,								02000	
	R OSE INTERI E NO.	NAL USE			POD NO.		WR-20 WE TRN NO.	LL RE	CORD & LOG (Ve	rsion 06/30/2017)
-	CATION				10010.	MOT I				PAGE 2 OF 2
LUC	2111011					WELL	TAG ID NO.			



## PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

	NERAL / WELL OWNER						
State E	ngineer Well Number: <u>C-4</u> wner: <u>XTO ENERGY</u> (Kyle	Littrell)		DL	one No.: _432	2.682.8873	
Well of	g address: 6401 Holiday Hi	ill Dr.		- PR	one No.:		
City:	Midland		State:	Texas		Zip code	79707
II. WI	ELL PLUGGING INFOR	MATION:					
1)	Name of well drilling cor	npany that plugged w	ell: Jackie D.	Atkins ( Atkin:	s Engineering	Associates	nc.)
2)	New Mexico Well Drille	r License No.: 1249			Expira	ation Date:	04/30/23
3)	Well plugging activities v Shane Eldridge, Carmelo			ll driller(s)/rig	g supervisor(s	):	
4)	Date well plugging began	n: <u>06/08/2021</u>	Date	well pluggin	g concluded:	06/08/202	1
5)	GPS Well Location:	Latitude: 32 Longitude: 10	deg, 3deg,	14 mi 55 mi	in, 42.15 in, 6.20	_ sec _ sec, WGS	84
6)	Depth of well confirmed by the following manner:		ng as:105	ft below g	ground level (	bgl),	
7)	Static water level measur	ed at initiation of plug	ging:n/a	ft bgl			
8)	Date well plugging plan	of operations was appr	oved by the St	ate Engineer:	04/12/2021		
9)	Were all plugging activiti differences between the a	ies consistent with an approved plugging plan	approved plug n and the well	ging plan? as it was plug	Yes ged (attach a		olease describe es as needed):

Version: September 8, 2009

Page 1 of 2

Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

#### For each interval plugged, describe within the following columns:

D-10' Hydrated Bentonite  10'-105' Drill Cuttings  Approx. 151 gallons  151 gallons  Boring  Boring	Depth (ft bgl)	Plugging <u>Material Used</u> (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement  Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
10'-106' Drill Cuttings Approx. 151 gallons 151 gallons Boring	_		Approx. 15.6 gallons	15.9 gallons	Augers	·
Drill Cuttings Approx. 151 gallons Boring	_					
Drill Cuttings Approx. 151 gallons Boring	-					
	-		Approx. 151 gallons	151 gallons	Boring	
	-					
	-					
	-					
	_					
	*					
3- 3- 3- 3- 3- 3- 3- 3- 3-3- 3-3- 3-3-	=					
3- 3- 3- 3- 3- 3-3- 3-3- 3-3-3-3-3-3-3-	A		,			
3- 3- 3- 3- 3- 3-3- 00 At N = 0.707 t > w7:100	-	1				
3- 3- 3-3-3-00 At N =0.007 ( ***001 At N	-					
35 00 A N 10 2021 MO11 A	_					
The state of the s		j			obe on a	NN 402021 M2:13
MULTIPLY BY AND OBTAIN  cubic feet x 7.4805 = gallons  cubic yards x 201.97 = gallons			cubic feet x 7.4	4805 = gallons		

#### III. SIGNATURE:

I, Jackie D. Atkins , say that I am familiar with the rule	
Engineer pertaining to the plugging of wells and that each and all of the statements in this Plu	gging Record and attachments
are true to the best of my knowledge and belief.	
Jack Atkins	06/09/2021
Signature of Well Driller	Date

Version: September 8, 2009 Page 2 of 2

# 2021-06-07\_C-4526\_POD1\_OSE\_Well Record and Log\_155-forsign

Final Audit Report 2021-06-09

Created: 2021-06-09

By: Lucas Middleton (lucas@atkinseng.com)

Status: Signed

Transaction ID: CBJCHBCAABAARqNIK9bZ1aR8TqT\_nRoFVSc9LoFFimkY

## "2021-06-07\_C-4526\_POD1\_OSE\_Well Record and Log\_155-for sign" History

- Document created by Lucas Middleton (lucas@atkinseng.com) 2021-06-09 - 5:43:46 PM GMT- IP address: 69.21.248.123
- Document emailed to Jack Atkins (jack@atkinseng.com) for signature 2021-06-09 5:44:36 PM GMT
- Email viewed by Jack Atkins (jack@atkinseng.com) 2021-06-09 6:44:57 PM GMT- IP address: 64.90.153.232
- Document e-signed by Jack Atkins (jack@atkinseng.com)

  Signature Date: 2021-06-09 6:45:44 PM GMT Time Source: server- IP address: 64.90.153.232
- Agreement completed. 2021-06-09 - 6:45:44 PM GMT

195E BYT JEN 10 2021 #42/16





APPENDIX B

Lithologic / Soil Sampling Logs

								Committee Name of BUIGA	D-+ 02/02/2022		
	200							Sample Name: BH01 Site Name: Poker Lake Unit 158	Date: 03/03/2022		
	25	E	N	5		U	M	Incident Number: NAPP2202534			
	100								+547		
		LITHO	OG!	· / sou s	SAMPLING			Job Number: 03C1558002			
Coordi		2.237342		_	AIVIPLING	LOG		Logged By: BB Hole Diameter: 3.5"	Method: Hand Auger Total Depth: 9'		
					ith HACH Ch	Jarida Tast (	String and	PID for chloride and vapor, respe	·		
			-				•	factors included.	ectively. Cilionae test		
				_			l ~				
ure ent	ide 1)	or )	ng	e D	Sample	Depth	SCS/Rocl Symbol				
Moisture Content Chloride (ppm) Vapor (ppm) Staining Sample ID Debth (tt pds) USCS/Rock								Lithologic D	escriptions		
Σ̈́	ch (I	> =	St								
						0	CCHE	0'-1', CALICHE, moist, tan-lig	ht brown,		
					-			unconsolidated, strong H	C odor, no stain, fill.		
М	828	271	Υ	BH01	1 -	1	SP	1'-9', SAND, moist, brown, po	oorly graded, fine		
					_	<u> </u>		grain, strong HC odor with	n gray staining.		
					-	-					
М	1,338	148	Υ		-	2	SP	2'-9', no stain.			
					_	-					
					_						
М	1,601	153	Υ	BH01A	3	3	SP				
					_	<u> </u>					
М	2,273	60.9	N	BH01B	4	4	SP	4'-5', mild HC odor.			
IVI	2,275	60.9	IN	рилтр	4 .	_	38	4-5, Illia HC dadi.			
					-	F					
М	3,164	22.7	N	BH01C	5	5	SP				
					_						
					-	-					
М	3,438	4.6	N	BH01D	6	6	SP	6'-9', no odor.			
					-	-					
1					_	_					
М	2,738	2.7	N		-	7	SP				
					_	<u> </u>					
М	3,438	2.8	N		_	8	SP				
'*'	<i>3,</i> 430	2.0	١,٨		_	Ľ	]				
					-	}					
М	2,738	2.5	N	BH01E	9	9	SP	TD @ 9' bgs, Auger Refusal fi	rom caliche.		
						TD @	9 9 feet	bgs			
					<u> </u>						
								_			
									_		

								I	
	100	_					17 Kriston	Sample Name: PH01	Date: 03/30/2022
			N	S	OL			Site Name: Poker Lake Unit 158	247
	- 3							Incident Number: NAPP22025343	347
<b> </b>		LITUO:	00:	. /		2100		Job Number: 03C1558002	land the second
					SAMPLING	LOG		Logged By: BB	Method: Hydrovac
		2.237418						Hole Diameter: N/A	Total Depth: 6'
			_					PID for chloride and vapor, respectation factors included.	tively. Chloride test
'		I				1		Γ	
ure int	de 🧢	z (=	ng	Q	Sample	Donth	SCS/Rock Symbol		
istu nte	Moisture Content Chloride (ppm) Vapor (ppm) Staining Samble ID Debth (tt pds) Debth (tt pds) USCS/Rock							Lithologic De	escriptions
SS Stail (ft pgs)   SS Stail (by SS)   SS Stail (ft pgs)   SS Stai									
						0		0'-1', CALICHE, moist, tan-light	t brown.
					_	<u> </u>		unconsolidated, strong HC	odor, no stain, fill.
М	392	8.5	Υ	PH01	1 -	1	SP	1'-9', SAND, moist, brown, poo	orly graded, fine
'''	332					<u> </u>	]	grain, strong HC odor with	
					-	}			
М	442	0.4	Υ		_	2	SP	2'-9', no stain.	
					_	<b>L</b>			
					_				
М	560	0.4	Υ	PH01A	3	3	SP		
					_				
М	392	0.1	N	PH01B	4 -	4	SP	4'-5', mild HC odor.	
IVI	332	0.1	IN	FUOTE	4 -	<u> </u>	35	14 -5 , Illila HC babi.	
					-	-			
М	392	0.0	N	PH01C	5	5	SP		
					_				
					_	L			
M	442	0.0	N	PH01D	6	6	SP	6', no odor.	
					-	<u> </u>			
					_				
					_	_			
						F			
					_	_			
					_	<u> </u>			
					-	ł			
					_	F			
	_	<u> </u>				TD @	0 6 feet	l hgs	
						100	, 0 1000	~0~	

								Sample Name: PH02	Dato: 02/20/2022
7	-							Site Name: Poker Lake Unit 158	Date: 03/30/2022
			N	5	OL			Incident Number: NAPP220253434	17
	- 5							Job Number: 03C1558002	*/
		יחדוו	UG I	^ / SOIL 9	SAMPLING	106		Logged By: BB	Method: Hydrovac
Coordi		2.237314			AIVIFLIIVO	100		Hole Diameter: N/A	Total Depth: 6'
					ith HACH Ch	lorida Tast 9	String and	PID for chloride and vapor, respecti	
								factors included.	ivery. Cilioride test
Moisture Content Chloride (ppm) Vapor (ppm) Staining Sample ID Debth (tt pds) USCS/Rock									
oist.	Content (ppm)  Vapor  Vapor  (ppm)  Staining  (tt pds)  SSCS/Rocl							Lithologic Des	criptions
Moisture Chloride Chl									
						0	CCHE	0'-1', CALICHE, moist, tan-light	brown.
						-		unconsolidated, strong HC o	odor, no stain, fill.
М	212	0.7	Υ	PH02	1 -	_ 1	SP	1'-9', SAND, moist, brown, poor	rly graded fine
141	212	0.7	•	11102		- <sup>-</sup>	51	grain, strong HC odor with g	ray staining.
					-	-			
М	296	0.8	Υ		_	_ 2	SP	2'-9', no stain.	
					_	_			
					-	-			
М	296	0.1	Υ	PH02A	3	3	SP		
					-	_			
						- -			
М	<129	0.2	N	PH02B	4	4	SP	4'-5', mild HC odor.	
					_	-			
М	252	0.3	N	PH02C	5 -	5	SP		
IVI	232	0.5	IN	PHOZE	5 -	. ,	35		
					_	-			
М	252	0.2	N	PH02D	6	6	SP	6', no odor.	
					_	_			
					=	=			
						-			
					-	_			
					_	-			
					_	-			
						<b>-</b> -			
					] -	_			
					<u> </u>	<b>-</b>			
						TD @	6 feet	bgs	
			_						
1						<u> </u>			
1									
1									

l								<u> </u>	
-	100							Sample Name: PH03	Date: 03/30/2022
			N	S	OL			Site Name: Poker Lake Unit 158	147
	- 3						1000	Incident Number: NAPP22025343	547
								Job Number: 03C1558002	
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: BB	Method: Hydrovac	
·							Hole Diameter: N/A	Total Depth: 6'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	scriptions
				01		0		0'-1', CALICHE, moist, tan-light	t brown,
					-	-		unconsolidated, strong HC	odor, no stain, fill.
М	<124	2	Υ	PH03	1 -	1	SP	1'-9', SAND, moist, brown, poo grain, strong HC odor with	orly graded, fine gray staining.
М	442	0.8	Υ		- - -	2	SP	2'-9', no stain.	
М	442	0.8	Υ	PH03A	3 -	- _ 3 -	SP		
М	560	0.9	N	PH03B	4 -	4	SP	4'-5', mild HC odor.	
М	442	0.7	N	PH03C	5 -	- _ 5 -	SP		
М	296	0.8	N	PH03D	6	- - -	SP	6', no odor.	
					-	- - - -			
					- - -	- - -			
				-		TD @	9 6 feet	bgs	
			_						
						_			
i									
1									

	100							Sample Name: PH04	Date: 03/30/2022
	al I		N	S	OL			Site Name: Poker Lake Unit 158	247
_							a design	Incident Number: NAPP2202534	347
		LITUO	06'	. /		Job Number: 03C1558002	lan ii ii ii i		
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: BB	Method: Hydrovac	
Coordinates: 32.237275, -103.913885  Comments: Field screening conducted with HACH Chloride Test Strips and							Hole Diameter: N/A	Total Depth: 6'	
			_					factors included.	ctively. Chloride test
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	escriptions
					1	0	ССНЕ	0'-1', CALICHE, moist, tan-ligh unconsolidated, no odor,	nt brown, no stain, fill.
М	<124	0.8	N	PH04	1 -	1	SP	1'-9', SAND, moist, brown, po grain, no odor, no staining	
М	<124	0.8	N		- -	2	SP	2'-9', no stain.	
М	<124	0.7	Υ	PH04A	3 -	- _ 3 -	SP		
М	<124	0.8	N	PH04B	4	- - - 4	SP		
М	<124	0.5	N	PH04C	5 <u>-</u>	- - - 5	SP		
М	<124	0.4	N	PH04D	6 -	- - - 6	SP	6', no odor.	
							2 ( (	L	
						10 @	9 6 feet	ogs	
								_	
1									



**APPENDIX C** 

Photographic Log

## **ENSOLUM**

#### **Photographic Log**

XTO Energy, Inc.
Poker Lake Unit 158
Incident Number NAPP2202534347



Photograph 1 Date: March 3, 2022

Description: View of breached liner area.



Photograph 2 Date: March 3, 2022

Description: View of borehole BH01 location.



Photograph 3
Date: March 30, 2022
Description: View of delineation PH01 location.



Photograph 4 Date: April 13, 2022

Description: View of patched liner.



### APPENDIX D

Laboratory Analytical Reports & Chain-of-Custody

Documentation



## **Environment Testing America**

## **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2048-1

Laboratory Sample Delivery Group: 31403236.029 TASK 08.02

Client Project/Site: PLU 158 BATTERY

For:

WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, Texas 75207

Attn: Benjamin Belill

JURAMER

Authorized for release by: 3/14/2022 2:17:35 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

.....LINKS

Review your project results through

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env

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

intended to be the legally binding equivalent of a traditionally handwritten signature.

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

1

2

3

4

**5** 

7

8

11

12

15

14

Released to Imaging: 5/18/2022 11:45:28 AM

Client: WSP USA Inc. Project/Site: PLU 158 BATTERY Laboratory Job ID: 890-2048-1 SDG: 31403236.029 TASK 08.02

## **Table of Contents**

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	10
QC Sample Results	11
QC Association Summary	15
Lab Chronicle	17
Certification Summary	19
Method Summary	20
Sample Summary	21
Chain of Custody	22
Receipt Checklists	23

6

8

10

12

13

14

#### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-2048-1 Project/Site: PLU 158 BATTERY SDG: 31403236.029 TASK 08.02

#### **Qualifiers**

#### **GC VOA**

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

#### **GC Semi VOA**

Qualifier	Qualifier Description
-----------	-----------------------

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

#### **HPLC/IC**

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

#### **Glossary**

Abbreviation	These commonly used abbreviations may or may not be present in this report.					
п	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" Minimum Detectable Activity (Radiochemistry) MDA MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit Minimum Level (Dioxin) ML MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

**PQL Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

**RER** Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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: WSP USA Inc.

Job ID: 890-2048-1 SDG: 31403236.029 TASK 08.02 Project/Site: PLU 158 BATTERY

Job ID: 890-2048-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2048-1

#### Receipt

The samples were received on 3/4/2022 1:01 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

#### **GC VOA**

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH01D (890-2048-5). 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

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.

Lab Sample ID: 890-2048-1

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-2048-1

Project/Site: PLU 158 BATTERY SDG: 31403236.029 TASK 08.02

**Client Sample ID: BH01** 

Date Collected: 03/03/22 10:00 Date Received: 03/04/22 13:01

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/11/22 08:45	03/11/22 17:46	1
Toluene	0.00370		0.00200	mg/Kg		03/11/22 08:45	03/11/22 17:46	1
Ethylbenzene	0.00235		0.00200	mg/Kg		03/11/22 08:45	03/11/22 17:46	1
m-Xylene & p-Xylene	0.0134		0.00400	mg/Kg		03/11/22 08:45	03/11/22 17:46	1
o-Xylene	0.0177		0.00200	mg/Kg		03/11/22 08:45	03/11/22 17:46	1
Xylenes, Total	0.0311		0.00400	mg/Kg		03/11/22 08:45	03/11/22 17:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130			03/11/22 08:45	03/11/22 17:46	1
1,4-Difluorobenzene (Surr)	107		70 - 130			03/11/22 08:45	03/11/22 17:46	1
Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0372		0.00400	mg/Kg			03/14/22 14:51	1
Method: 8015 NM - Diesel Range	Organics (DB)	O) (GC)						
Analyte	-	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	2870	<del></del>	49.8	mg/Kg			03/09/22 19:12	1
	2010			99				•
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.8	U	49.8	mg/Kg		03/08/22 08:46	03/09/22 04:42	1
(GRO)-C6-C10								
Diesel Range Organics (Over	2870		49.8	mg/Kg		03/08/22 08:46	03/09/22 04:42	1
C10-C28)			40.0			03/08/22 08:46	00/00/00 04:40	
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		00/00/22 00:40	03/09/22 04:42	1
Oll Range Organics (Over C28-C36)  Surrogate	<49.8  %Recovery		49.8Limits	mg/kg		Prepared Prepared	03/09/22 04:42  Analyzed	
,				llig/Kg				Dil Fac
Surrogate 1-Chlorooctane	%Recovery		Limits	ilig/kg		Prepared	Analyzed	Dil Fac
Surrogate 1-Chlorooctane o-Terphenyl	%Recovery 110 103	Qualifier	Limits 70 - 130	ilig/Ng		Prepared 03/08/22 08:46	Analyzed 03/09/22 04:42	1 Dil Fac
Surrogate	%Recovery 110 103 omatography -	Qualifier	Limits 70 - 130	Unit	D	Prepared 03/08/22 08:46	Analyzed 03/09/22 04:42	Dil Fac

**Client Sample ID: BH01A** 

Date Collected: 03/03/22 10:45 Date Received: 03/04/22 13:01

Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/11/22 08:45	03/11/22 18:07	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/11/22 08:45	03/11/22 18:07	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/11/22 08:45	03/11/22 18:07	1
m-Xylene & p-Xylene	0.00567		0.00398	mg/Kg		03/11/22 08:45	03/11/22 18:07	1
o-Xylene	0.0118		0.00199	mg/Kg		03/11/22 08:45	03/11/22 18:07	1
Xylenes, Total	0.0175		0.00398	mg/Kg		03/11/22 08:45	03/11/22 18:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			03/11/22 08:45	03/11/22 18:07	1

**Eurofins Carlsbad** 

Lab Sample ID: 890-2048-2

Matrix: Solid

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-2048-1

Project/Site: PLU 158 BATTERY SDG: 31403236.029 TASK 08.02

Client Sample ID: BH01A Lab Sample ID: 890-2048-2

Date Collected: 03/03/22 10:45 Matrix: Solid Date Received: 03/04/22 13:01

Sample Depth: 3

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	104		70 - 130			03/11/22 08:45	03/11/22 18:07	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0175		0.00398	mg/Kg	<u></u>		03/14/22 14:51	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	4980		50.0	mg/Kg			03/09/22 19:12	1
Method: 8015B NM - Diesel Rang	e Organics (Di	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	78.7		50.0	mg/Kg		03/08/22 08:46	03/09/22 05:05	1
Diesel Range Organics (Over C10-C28)	4900		50.0	mg/Kg		03/08/22 08:46	03/09/22 05:05	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 08:46	03/09/22 05:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	131	S1+	70 - 130			03/08/22 08:46	03/09/22 05:05	

Method: 300.0 - Anions, Ion Chromatography - Soluble Result Qualifier Dil Fac Analyte RLUnit D Prepared Analyzed Chloride 1240 25.0 mg/Kg 03/12/22 17:30

70 - 130

131 S1+

Client Sample ID: BH01B Date Collected: 03/03/22 13:00 Date Received: 03/04/22 13:01

Released to Imaging: 5/18/2022 11:45:28 AM

Sample Depth: 4

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/11/22 08:45	03/11/22 18:27	1
Toluene	0.0375		0.00200	mg/Kg		03/11/22 08:45	03/11/22 18:27	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/11/22 08:45	03/11/22 18:27	1
m-Xylene & p-Xylene	0.00763		0.00399	mg/Kg		03/11/22 08:45	03/11/22 18:27	1
o-Xylene	0.00277		0.00200	mg/Kg		03/11/22 08:45	03/11/22 18:27	1
Xylenes, Total	0.0104		0.00399	mg/Kg		03/11/22 08:45	03/11/22 18:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	445	S1+	70 - 130			03/11/22 08:45	03/11/22 18:27	1
1,4-Difluorobenzene (Surr)	89		70 - 130			03/11/22 08:45	03/11/22 18:27	1
Method: Total BTEX - Total B1	TEX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0479		0.00399	mg/Kg			03/14/22 14:51	1
Method: 8015 NM - Diesel Rar	nge Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1760		50.0	mg/Kg			03/09/22 19:12	

**Eurofins Carlsbad** 

03/08/22 08:46

03/09/22 05:05

Lab Sample ID: 890-2048-3

**Matrix: Solid** 

Lab Sample ID: 890-2048-3

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-2048-1

Project/Site: PLU 158 BATTERY SDG: 31403236.029 TASK 08.02

**Client Sample ID: BH01B** Date Collected: 03/03/22 13:00 Date Received: 03/04/22 13:01

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/08/22 08:46	03/09/22 05:27	1
Diesel Range Organics (Over C10-C28)	1760		50.0	mg/Kg		03/08/22 08:46	03/09/22 05:27	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 08:46	03/09/22 05:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane			70 - 130			03/08/22 08:46	03/09/22 05:27	1
o-Terphenyl	113		70 - 130			03/08/22 08:46	03/09/22 05:27	1
- Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Lab Sample ID: 890-2048-4 Client Sample ID: BH01C Date Collected: 03/03/22 12:00 **Matrix: Solid** 

Date Received: 03/04/22 13:01

Sample Depth: 5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/11/22 08:45	03/11/22 18:48	1
Toluene	< 0.00199	U	0.00199	mg/Kg		03/11/22 08:45	03/11/22 18:48	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/11/22 08:45	03/11/22 18:48	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		03/11/22 08:45	03/11/22 18:48	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		03/11/22 08:45	03/11/22 18:48	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/11/22 08:45	03/11/22 18:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			03/11/22 08:45	03/11/22 18:48	1
1,4-Difluorobenzene (Surr)	110		70 - 130			03/11/22 08:45	03/11/22 18:48	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			03/14/22 14:51	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	2030		50.0	mg/Kg			03/09/22 19:12	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/08/22 08:46	03/09/22 05:46	1
Diesel Range Organics (Over C10-C28)	2030		50.0	mg/Kg		03/08/22 08:46	03/09/22 05:46	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 08:46	03/09/22 05:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130			03/08/22 08:46	03/09/22 05:46	1
	125		70 - 130			03/08/22 08:46	03/09/22 05:46	

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-2048-1

Project/Site: PLU 158 BATTERY SDG: 31403236.029 TASK 08.02

**Client Sample ID: BH01C** Lab Sample ID: 890-2048-4

Date Collected: 03/03/22 12:00 Matrix: Solid Date Received: 03/04/22 13:01

Sample Depth: 5

Method: 300.0 - Anions, Ion Chromatography - Soluble											
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Į	Chloride	2670		24.9	mg/Kg			03/12/22 17:42	5		

**Client Sample ID: BH01D** Lab Sample ID: 890-2048-5

Date Collected: 03/03/22 12:30 Date Received: 03/04/22 13:01

Sample Depth: 6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/11/22 08:45	03/11/22 19:08	1
Toluene	< 0.00199	U	0.00199	mg/Kg		03/11/22 08:45	03/11/22 19:08	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		03/11/22 08:45	03/11/22 19:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		03/11/22 08:45	03/11/22 19:08	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		03/11/22 08:45	03/11/22 19:08	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/11/22 08:45	03/11/22 19:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	302	S1+	70 - 130			03/11/22 08:45	03/11/22 19:08	1
1,4-Difluorobenzene (Surr)	98		70 - 130			03/11/22 08:45	03/11/22 19:08	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			03/14/22 14:51	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	78.6		49.9	mg/Kg			03/09/22 19:12	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/08/22 08:46	03/09/22 03:33	1
Diesel Range Organics (Over C10-C28)	78.6		49.9	mg/Kg		03/08/22 08:46	03/09/22 03:33	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/08/22 08:46	03/09/22 03:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130			03/08/22 08:46	03/09/22 03:33	1
o-Terphenyl	115		70 - 130			03/08/22 08:46	03/09/22 03:33	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	3120		25.0	mg/Kg			03/12/22 18:00	5

Lab Sample ID: 890-2048-6

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-2048-1

Project/Site: PLU 158 BATTERY SDG: 31403236.029 TASK 08.02

**Client Sample ID: BH01E** Date Collected: 03/03/22 13:00

Date Received: 03/04/22 13:01

Sample Depth: 9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		03/11/22 08:45	03/11/22 19:29	
Toluene	<0.00200	U	0.00200	mg/Kg		03/11/22 08:45	03/11/22 19:29	
Ethylbenzene	0.00325		0.00200	mg/Kg		03/11/22 08:45	03/11/22 19:29	
m-Xylene & p-Xylene	0.0174		0.00399	mg/Kg		03/11/22 08:45	03/11/22 19:29	
o-Xylene	0.0301		0.00200	mg/Kg		03/11/22 08:45	03/11/22 19:29	
Xylenes, Total	0.0475		0.00399	mg/Kg		03/11/22 08:45	03/11/22 19:29	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	88		70 - 130			03/11/22 08:45	03/11/22 19:29	
1,4-Difluorobenzene (Surr)	117		70 - 130			03/11/22 08:45	03/11/22 19:29	
Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	0.0508		0.00399	mg/Kg			03/14/22 14:51	
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			03/09/22 19:12	
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/08/22 08:46	03/09/22 04:19	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/08/22 08:46	03/09/22 04:19	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/08/22 08:46	03/09/22 04:19	
,	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
Surrogate	%Recovery	Qualifier	Limits 70 - 130			Prepared 03/08/22 08:46	Analyzed 03/09/22 04:19	
Surrogate 1-Chlorooctane		Qualifier						
Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion Chro	111 109		70 - 130			03/08/22 08:46	03/09/22 04:19	
Surrogate 1-Chlorooctane o-Terphenyl	111 109 omatography -		70 - 130	_ Unit	<u>D</u>	03/08/22 08:46	03/09/22 04:19	Dil Fa

# **Surrogate Summary**

 Client: WSP USA Inc.
 Job ID: 890-2048-1

 Project/Site: PLU 158 BATTERY
 SDG: 31403236.029 TASK 08.02

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-12301-A-6-B MS	Matrix Spike	113	110	
880-12301-A-6-C MSD	Matrix Spike Duplicate	112	112	
890-2048-1	BH01	87	107	
890-2048-2	BH01A	117	104	
890-2048-3	BH01B	445 S1+	89	
890-2048-4	BH01C	104	110	
890-2048-5	BH01D	302 S1+	98	
890-2048-6	BH01E	88	117	
LCS 880-21364/1-A	Lab Control Sample	96	104	
LCSD 880-21364/2-A	Lab Control Sample Dup	103	109	
MB 880-21364/5-A	Method Blank	104	104	
Surrogate Legend				
BFB = 4-Bromofluorobe	nzene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-12075-A-21-B MS	Matrix Spike	106	86	
880-12075-A-21-C MSD	Matrix Spike Duplicate	110	89	
890-2048-1	BH01	110	103	
890-2048-2	BH01A	131 S1+	131 S1+	
890-2048-3	BH01B	116	113	
890-2048-4	BH01C	128	125	
890-2048-5	BH01D	116	115	
890-2048-6	BH01E	111	109	
LCS 880-21112/2-A	Lab Control Sample	102	89	
LCSD 880-21112/3-A	Lab Control Sample Dup	106	93	
MB 880-21112/1-A	Method Blank	137 S1+	139 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

# QC Sample Results

Client: WSP USA Inc. Job ID: 890-2048-1 SDG: 31403236.029 TASK 08.02 Project/Site: PLU 158 BATTERY

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-21364/5-A

**Matrix: Solid** 

Analysis Batch: 21361

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21364

	МВ	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/11/22 08:45	03/11/22 12:56	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/11/22 08:45	03/11/22 12:56	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/11/22 08:45	03/11/22 12:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		03/11/22 08:45	03/11/22 12:56	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/11/22 08:45	03/11/22 12:56	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/11/22 08:45	03/11/22 12:56	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	03/11/22 08:45	03/11/22 12:56	1
1,4-Difluorobenzene (Surr)	104		70 - 130	03/11/22 08:45	03/11/22 12:56	1

Lab Sample ID: LCS 880-21364/1-A

Matrix: Solid

Analysis Batch: 21361

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 21364

	<b>Spike</b>	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09733		mg/Kg		97	70 - 130	
Toluene	0.100	0.09798		mg/Kg		98	70 - 130	
Ethylbenzene	0.100	0.1017		mg/Kg		102	70 - 130	
m-Xylene & p-Xylene	0.200	0.2078		mg/Kg		104	70 - 130	
o-Xylene	0.100	0.1011		mg/Kg		101	70 - 130	

Spike

Added

0.100

0.100

0.100

0.200

0.100

0.2119

0.1041

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	96	70 - 130
1,4-Difluorobenzene (Surr)	104	70 - 130

Lab Sample ID: LCSD 880-21364/2-A

**Matrix: Solid** 

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 21361

Client Sample ID: Lab Control Sample Dup

70 - 130

70 - 130

Prep Type: Total/NA Prep Batch: 21364

LCSD LCSD RPD %Rec. Result Qualifier Unit %Rec Limits Limit 0.1003 mg/Kg 100 70 - 130 3 35 0.1006 mg/Kg 101 70 - 130 3 35 0.1023 mg/Kg 102 70 - 130 35

106

104

mg/Kg

mg/Kg

LCSD LCSD

Surrogate	%Recovery Qua	alifier Limits
4-Bromofluorobenzene (Surr)	103	70 - 130
1,4-Difluorobenzene (Surr)	109	70 - 130

Lab Sample ID: 880-12301-A-6-B MS

**Matrix: Solid** 

Analysis Batch: 21361

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

35

35

Prep Batch: 21364

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0998	0.07999		mg/Kg		80	70 - 130	
Toluene	<0.00200	U	0.0998	0.07840		mg/Kg		77	70 - 130	

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Page 11 of 24

# QC Sample Results

 Client: WSP USA Inc.
 Job ID: 890-2048-1

 Project/Site: PLU 158 BATTERY
 SDG: 31403236.029 TASK 08.02

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

Lab Sample ID: 880-12301-A-6-B MS

Client Sample ID: Matrix Spike

Matrix: Solid
Analysis Batch: 21361

Sample Sample Spike MS MS %Rec.

		-up.o							,0.100.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Ethylbenzene	<0.00200	U	0.0998	0.07743		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1595		mg/Kg		79	70 - 130
o-Xylene	< 0.00200	U	0.0998	0.08084		mg/Kg		80	70 - 130

 Surrogate
 %Recovery
 Qualifier
 Limits

 4-Bromofluorobenzene (Surr)
 113
 70 - 130

 1,4-Difluorobenzene (Surr)
 110
 70 - 130

Lab Sample ID: 880-12301-A-6-C MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Total/NA
Analysis Batch: 21361 Prep Batch: 21364

Sample Sample Spike MSD MSD %Rec. RPD Result Qualifier %Rec RPD Limit Analyte babbA Result Qualifier Limits Unit Benzene <0.00200 U 0.0996 0.08021 mg/Kg 81 70 - 130 0 35 Toluene <0.00200 0.0996 0.08055 mg/Kg 80 70 - 130 3 35 Ethylbenzene <0.00200 0.0996 0.07568 75 70 - 130 2 35 U mg/Kg m-Xylene & p-Xylene < 0.00399 U 0.199 0.1542 mq/Kq 76 70 - 130 3 35 0.0996 74 70 - 130 o-Xylene <0.00200 U 0.07417 mg/Kg 35

 Surrogate
 %Recovery
 Qualifier
 Limits

 4-Bromofluorobenzene (Surr)
 112
 70 - 130

 1,4-Difluorobenzene (Surr)
 112
 70 - 130

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

Lab Sample ID: MB 880-21112/1-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 21117

мв мв Result Qualifier RL Unit D Prepared Dil Fac Analyte Analyzed 03/08/22 08:46 03/08/22 22:17 <50.0 U 50.0 Gasoline Range Organics mg/Kg (GRO)-C6-C10 03/08/22 22:17 Diesel Range Organics (Over <50.0 U 50.0 03/08/22 08:46 mg/Kg C10-C28) OII Range Organics (Over C28-C36) <50.0 U 50.0 03/08/22 08:46 03/08/22 22:17 mg/Kg

MB MB Limits %Recovery Qualifier Prepared Analyzed Dil Fac Surrogate 137 70 - 130 03/08/22 08:46 1-Chlorooctane S1+ 03/08/22 22:17 139 S1+ 70 - 130 03/08/22 08:46 03/08/22 22:17 o-Terphenyl

Lab Sample ID: LCS 880-21112/2-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 21117 Prep Batch: 21112

	<b>Spike</b>	LCS	LCS				%Rec.		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	1000	840.9		mg/Kg		84	70 - 130		-
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	908.4		mg/Kg		91	70 - 130		
C10-C28)									

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Prep Batch: 21112

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rofins Carisba

Project/Site: PLU 158 BATTERY

Job ID: 890-2048-1

SDG: 31403236.029 TASK 08.02

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

Lab Sample ID: LCS 880-21112/2-A

**Matrix: Solid** 

Client: WSP USA Inc.

**Analysis Batch: 21117** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21112

LCS LCS

%Recovery Qualifier Surrogate Limits 1-Chlorooctane 102 70 - 130 o-Terphenyl 89 70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Batch: 21112

Lab Sample ID: LCSD 880-21112/3-A **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 21117** 

Spike LCSD LCSD %Rec. RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit Gasoline Range Organics 1000 824.5 82 70 - 130 2 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 915.1 mg/Kg 92 70 - 13020

C10-C28)

LCSD LCSD

Surrogate %Recovery Qualifier Limits 106 70 - 130 1-Chlorooctane o-Terphenyl 93 70 - 130

Lab Sample ID: 880-12075-A-21-B MS Client Sample ID: Matrix Spike

MS MS

**Matrix: Solid** 

**Analysis Batch: 21117** 

Prep Type: Total/NA Prep Batch: 21112

%Rec

Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1151		mg/Kg		113	70 - 130
Diesel Range Organics (Over	<50.0	U	998	1134		mg/Kg		110	70 - 130

Cnika

C10-C28)

MS MS

Sample Sample

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: 880-12075-A-21-C MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** 

**Analysis Batch: 21117** 

Prep Type: Total/NA

Prep Batch: 21112

	Sample	Sample	<b>Бріке</b>	MSD	M2D				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	<50.0	U	998	1243		mg/Kg		122	70 - 130	8	20	
(GRO)-C6-C10												
Diesel Range Organics (Over	<50.0	U	998	1186		mg/Kg		115	70 - 130	4	20	
040 000)												

C10-C28)

MSD MSD

Camania Camania

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	89		70 - 130

# QC Sample Results

Client: WSP USA Inc. Job ID: 890-2048-1 Project/Site: PLU 158 BATTERY SDG: 31403236.029 TASK 08.02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-21030/1-A

**Matrix: Solid** 

Analyte

Chloride

**Analysis Batch: 21208** 

Client Sample ID: Method Blank **Prep Type: Soluble** 

мв мв Dil Fac Result Qualifier RL Unit D Prepared Analyzed <5.00 U 5.00 mg/Kg 03/12/22 16:49

Lab Sample ID: LCS 880-21030/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 21208** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits

Chloride 250 246.1 mg/Kg 98 90 - 110

Lab Sample ID: LCSD 880-21030/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 21208** 

LCSD LCSD %Rec. RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 251.2 mg/Kg 100 90 - 110

Lab Sample ID: 880-12056-A-16-C MS Client Sample ID: Matrix Spike **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 21208** 

Spike MS MS Sample Sample %Rec. Analyte Result Qualifier Added Result Qualifier %Rec Unit Limits Chloride 19.7 248 262.1 90 - 110 mg/Kg

Lab Sample ID: 880-12056-A-16-D MSD

**Matrix: Solid** 

**Analysis Batch: 21208** 

Sample Sample Spike MSD MSD %Rec. RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 248 19.7 266.0 mg/Kg 99 90 - 110 20

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Client Sample ID: Matrix Spike Duplicate

**Prep Type: Soluble** 

# **QC Association Summary**

 Client: WSP USA Inc.
 Job ID: 890-2048-1

 Project/Site: PLU 158 BATTERY
 SDG: 31403236.029 TASK 08.02

**GC VOA** 

## Analysis Batch: 21361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2048-1	BH01	Total/NA	Solid	8021B	21364
890-2048-2	BH01A	Total/NA	Solid	8021B	21364
890-2048-3	BH01B	Total/NA	Solid	8021B	21364
890-2048-4	BH01C	Total/NA	Solid	8021B	21364
890-2048-5	BH01D	Total/NA	Solid	8021B	21364
890-2048-6	BH01E	Total/NA	Solid	8021B	21364
MB 880-21364/5-A	Method Blank	Total/NA	Solid	8021B	21364
LCS 880-21364/1-A	Lab Control Sample	Total/NA	Solid	8021B	21364
LCSD 880-21364/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	21364
880-12301-A-6-B MS	Matrix Spike	Total/NA	Solid	8021B	21364
880-12301-A-6-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	21364

Prep Batch: 21364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2048-1	BH01	Total/NA	Solid	5035	
890-2048-2	BH01A	Total/NA	Solid	5035	
890-2048-3	BH01B	Total/NA	Solid	5035	
890-2048-4	BH01C	Total/NA	Solid	5035	
890-2048-5	BH01D	Total/NA	Solid	5035	
890-2048-6	BH01E	Total/NA	Solid	5035	
MB 880-21364/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-21364/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-21364/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-12301-A-6-B MS	Matrix Spike	Total/NA	Solid	5035	
880-12301-A-6-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 21563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2048-1	BH01	Total/NA	Solid	Total BTEX	
890-2048-2	BH01A	Total/NA	Solid	Total BTEX	
890-2048-3	BH01B	Total/NA	Solid	Total BTEX	
890-2048-4	BH01C	Total/NA	Solid	Total BTEX	
890-2048-5	BH01D	Total/NA	Solid	Total BTEX	
890-2048-6	BH01E	Total/NA	Solid	Total BTEX	

GC Semi VOA

# Prep Batch: 21112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-2048-1	BH01	Total/NA	Solid	8015NM Prep	
890-2048-2	BH01A	Total/NA	Solid	8015NM Prep	
890-2048-3	BH01B	Total/NA	Solid	8015NM Prep	
890-2048-4	BH01C	Total/NA	Solid	8015NM Prep	
890-2048-5	BH01D	Total/NA	Solid	8015NM Prep	
890-2048-6	BH01E	Total/NA	Solid	8015NM Prep	
MB 880-21112/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-21112/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-21112/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-12075-A-21-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-12075-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

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# **QC Association Summary**

Client: WSP USA Inc. Job ID: 890-2048-1 Project/Site: PLU 158 BATTERY SDG: 31403236.029 TASK 08.02

## GC Semi VOA

#### **Analysis Batch: 21117**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2048-1	BH01	Total/NA	Solid	8015B NM	21112
890-2048-2	BH01A	Total/NA	Solid	8015B NM	21112
890-2048-3	BH01B	Total/NA	Solid	8015B NM	21112
890-2048-4	BH01C	Total/NA	Solid	8015B NM	21112
890-2048-5	BH01D	Total/NA	Solid	8015B NM	21112
890-2048-6	BH01E	Total/NA	Solid	8015B NM	21112
MB 880-21112/1-A	Method Blank	Total/NA	Solid	8015B NM	21112
LCS 880-21112/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	21112
LCSD 880-21112/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	21112
880-12075-A-21-B MS	Matrix Spike	Total/NA	Solid	8015B NM	21112
880-12075-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	21112

#### Analysis Batch: 21253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2048-1	BH01	Total/NA	Solid	8015 NM	
890-2048-2	BH01A	Total/NA	Solid	8015 NM	
890-2048-3	BH01B	Total/NA	Solid	8015 NM	
890-2048-4	BH01C	Total/NA	Solid	8015 NM	
890-2048-5	BH01D	Total/NA	Solid	8015 NM	
890-2048-6	BH01E	Total/NA	Solid	8015 NM	

#### **HPLC/IC**

#### Leach Batch: 21030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2048-1	BH01	Soluble	Solid	DI Leach	
890-2048-2	BH01A	Soluble	Solid	DI Leach	
890-2048-3	BH01B	Soluble	Solid	DI Leach	
890-2048-4	BH01C	Soluble	Solid	DI Leach	
890-2048-5	BH01D	Soluble	Solid	DI Leach	
890-2048-6	BH01E	Soluble	Solid	DI Leach	
MB 880-21030/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21030/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21030/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12056-A-16-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-12056-A-16-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

# Analysis Batch: 21208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2048-1	BH01	Soluble	Solid	300.0	21030
890-2048-2	BH01A	Soluble	Solid	300.0	21030
890-2048-3	BH01B	Soluble	Solid	300.0	21030
890-2048-4	BH01C	Soluble	Solid	300.0	21030
890-2048-5	BH01D	Soluble	Solid	300.0	21030
890-2048-6	BH01E	Soluble	Solid	300.0	21030
MB 880-21030/1-A	Method Blank	Soluble	Solid	300.0	21030
LCS 880-21030/2-A	Lab Control Sample	Soluble	Solid	300.0	21030
LCSD 880-21030/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21030
880-12056-A-16-C MS	Matrix Spike	Soluble	Solid	300.0	21030
880-12056-A-16-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	21030

Client: WSP USA Inc.

Project/Site: PLU 158 BATTERY

Job ID: 890-2048-1 SDG: 31403236.029 TASK 08.02

Client Sample ID: BH01

Date Collected: 03/03/22 10:00 Date Received: 03/04/22 13:01 Lab Sample ID: 890-2048-1

Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			21364	03/11/22 08:45	MR	XEN MID
Total/NA	Analysis	8021B		1	21361	03/11/22 17:46	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	21563	03/14/22 14:51	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	21253	03/09/22 19:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			21112	03/08/22 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1	21117	03/09/22 04:42	AJ	XEN MID
Soluble	Leach	DI Leach			21030	03/07/22 10:54	CH	XEN MID
Soluble	Analysis	300.0		1	21208	03/12/22 17:24	CH	XEN MID

Client Sample ID: BH01A

Date Collected: 03/03/22 10:45

Lab Sample ID: 890-2048-2

Matrix: Solid

Date Received: 03/04/22 13:01

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			21364	03/11/22 08:45	MR	XEN MID
Total/NA	Analysis	8021B		1	21361	03/11/22 18:07	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	21563	03/14/22 14:51	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	21253	03/09/22 19:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			21112	03/08/22 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1	21117	03/09/22 05:05	AJ	XEN MID
Soluble	Leach	DI Leach			21030	03/07/22 10:54	СН	XEN MID
Soluble	Analysis	300.0		5	21208	03/12/22 17:30	CH	XEN MID

Client Sample ID: BH01B

Date Collected: 03/03/22 13:00 Date Received: 03/04/22 13:01 Lab Sample ID: 890-2048-3

Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			21364	03/11/22 08:45	MR	XEN MID
Total/NA	Analysis	8021B		1	21361	03/11/22 18:27	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	21563	03/14/22 14:51	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	21253	03/09/22 19:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			21112	03/08/22 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1	21117	03/09/22 05:27	AJ	XEN MID
Soluble	Leach	DI Leach			21030	03/07/22 10:54	CH	XEN MID
Soluble	Analysis	300.0		5	21208	03/12/22 17:36	CH	XEN MID

Client Sample ID: BH01C Date Collected: 03/03/22 12:00

Date Received: 03/04/22 13:01

Lab Sample ID: 890-2048-4

Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			21364	03/11/22 08:45	MR	XEN MID
Total/NA	Analysis	8021B		1	21361	03/11/22 18:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	21563	03/14/22 14:51	AJ	XEN MID

Client: WSP USA Inc.

Job ID: 890-2048-1 Project/Site: PLU 158 BATTERY SDG: 31403236.029 TASK 08.02

**Client Sample ID: BH01C** Lab Sample ID: 890-2048-4

Date Collected: 03/03/22 12:00 Matrix: Solid Date Received: 03/04/22 13:01

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	21253	03/09/22 19:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			21112	03/08/22 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1	21117	03/09/22 05:46	AJ	XEN MID
Soluble	Leach	DI Leach			21030	03/07/22 10:54	CH	XEN MID
Soluble	Analysis	300.0		5	21208	03/12/22 17:42	CH	XEN MID

Client Sample ID: BH01D Lab Sample ID: 890-2048-5

Date Collected: 03/03/22 12:30 **Matrix: Solid** Date Received: 03/04/22 13:01

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			21364	03/11/22 08:45	MR	XEN MID
Total/NA	Analysis	8021B		1	21361	03/11/22 19:08	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	21563	03/14/22 14:51	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	21253	03/09/22 19:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			21112	03/08/22 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1	21117	03/09/22 03:33	AJ	XEN MID
Soluble	Leach	DI Leach			21030	03/07/22 10:54	CH	XEN MID
Soluble	Analysis	300.0		5	21208	03/12/22 18:00	CH	XEN MID

Client Sample ID: BH01E Lab Sample ID: 890-2048-6 Date Collected: 03/03/22 13:00 **Matrix: Solid** 

Date Received: 03/04/22 13:01

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			21364	03/11/22 08:45	MR	XEN MID
Total/NA	Analysis	8021B		1	21361	03/11/22 19:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	21563	03/14/22 14:51	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	21253	03/09/22 19:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			21112	03/08/22 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1	21117	03/09/22 04:19	AJ	XEN MID
Soluble	Leach	DI Leach			21030	03/07/22 10:54	CH	XEN MID
Soluble	Analysis	300.0		10	21208	03/12/22 18:05	CH	XEN MID

Laboratory References:

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

# **Accreditation/Certification Summary**

Client: WSP USA Inc. Job ID: 890-2048-1 Project/Site: PLU 158 BATTERY SDG: 31403236.029 TASK 08.02

**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	T104704400-21-22	06-30-22	
The following analytes the agency does not of		but the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for which	
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		

# **Method Summary**

Client: WSP USA Inc.

Project/Site: PLU 158 BATTERY

Job ID: 890-2048-1

SDG: 31403236.029 TASK 08.02

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

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

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# **Sample Summary**

Client: WSP USA Inc.

Project/Site: PLU 158 BATTERY

Job ID: 890-2048-1

SDG: 31403236.029 TASK 08.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2048-1	BH01	Solid	03/03/22 10:00	03/04/22 13:01	1
890-2048-2	BH01A	Solid	03/03/22 10:45	03/04/22 13:01	3
890-2048-3	BH01B	Solid	03/03/22 13:00	03/04/22 13:01	4
890-2048-4	BH01C	Solid	03/03/22 12:00	03/04/22 13:01	5
890-2048-5	BH01D	Solid	03/03/22 12:30	03/04/22 13:01	6
890-2048-6	BH01E	Solid	03/03/22 13:00	03/04/22 13:01	9

		# CIX CIAC: 120:
XMNCO	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334	TX (210) 509-3334
LABORATORIES	Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Allanta,GA (770-449-8800) Tampa,FL (813-620-2000)	x (806)/94-1296  30) Tampa,FL (813-620-2000) <u>www.xenco.com</u> Page of
Project Manager:   Rank (il)	Bill to: (it different) Address School	Work Order Comments
<	Company Name: XTO Energy	Program: UST/PST DRP Brownfields RC Deperfund
Address: 3300 North A Street		
e ZIP:	City, State ZIP: Carlsbad, NM 88220	Reporting:Level II
Phone: (989) 854-0852	Email:	Deliverables: EDD ADaPT Other:
Project Name: PLU (S& Buttery	Turn Around	ANALYSIS REQUEST Work Order Notes
or 31403236	Tesle: 08,02 Ro	
P.O. Number: NAPP2202534347	7 Rush:	100/21/801:33
Sampler's Name: Sea Suit	Due Date:	
Temp Blank:	(es) No Wet Ice: (yes) No	
Temperature (°C): 5.6/5.4	ners	
(ye) N	onta	
Sample Custody Seals: Yes No NA	A 80	890-2048 Chain of Custody lab, if received by 4:30pm
Sample Identification Matrix	Date Time Depth Number (E	Sample Comments
SH01 8 3	XXX 1000 1, 1XX X	
	1045	
25.0	7 00 5,	
2517	,9 06.2)	
8HD1 E V	A A A A 6 0021 A	
	10 x x x x x x x x x x x x x x x x x x x	
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca TCLP/SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co	Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn Cu Pb Mn Mo Ni Se Ag Tl U 1631/245.1/7470/7471:Hg
Notice: Signature of this document and relinquishment of sa of service. Xenco will be liable only for the cost of samples of Xenco. A minimum charge of \$75.00 will be applied to eac	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	contractors. It assigns standard terms and conditions ich losses are due to circumstances beyond the control ms will be enforced unless previously negotiated.
Relinguished by: (Signature)	Received by: (Signature) Date/Time Relinquished by:	shed by: (Signature) Received by: (Signature) Date/Time
18 miles ( ) (W	1 (m) 3-4-22 1301 3/4/27@13.00 °	
5	0	

# **Login Sample Receipt Checklist**

Client: WSP USA Inc. Job Number: 890-2048-1

SDG Number: 31403236.029 TASK 08.02

List Source: Eurofins Carlsbad

Login Number: 2048 List Number: 1 Creator: Clifton, Cloe

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

# **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-2048-1

SDG Number: 31403236.029 TASK 08.02

List Source: Eurofins Midland List Creation: 03/07/22 09:20 AM

Creator: Rodriguez, Leticia

Login Number: 2048

List Number: 2

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

,

<6mm (1/4").



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2162-1

Laboratory Sample Delivery Group: 03C1558002

Client Project/Site: PLU 158 Battery

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

MRAMER

Authorized for release by: 4/7/2022 4:17:50 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS .....

Review your project results through

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 5/18/2022 11:45:28 AM

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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

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Client: Ensolum
Project/Site: PLU 158 Battery
Laboratory Job ID: 890-2162-1
SDG: 03C1558002

# **Table of Contents**

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	21
QC Sample Results	23
QC Association Summary	28
Lab Chronicle	33
Certification Summary	40
Method Summary	41
Sample Summary	42
Chain of Custody	43
Receipt Checklists	45

2

3

4

6

8

10

11

13

14

# **Definitions/Glossary**

Job ID: 890-2162-1 Client: Ensolum Project/Site: PLU 158 Battery

SDG: 03C1558002

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

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

**GC Semi VOA** 

Qualifier **Qualifier Description** 

F1 MS and/or MSD recovery exceeds control limits. S1+ Surrogate recovery exceeds control limits, high biased. Indicates the analyte was analyzed for but not detected.

**HPLC/IC** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**Glossary** 

Abbreviation These commonly used abbreviations may or may not be present in this report. Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery CFL Contains Free Liquid CFU Colony Forming Unit **CNF** Contains No Free Liquid

DFR Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor** 

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

Decision Level Concentration (Radiochemistry) DLC

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Method Detection Limit MDL Minimum Level (Dioxin) MPN Most Probable Number MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present PQL **Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

Toxicity Equivalent Factor (Dioxin) TEF Toxicity Equivalent Quotient (Dioxin) TEQ

**TNTC** Too Numerous To Count

#### **Case Narrative**

Client: Ensolum

Project/Site: PLU 158 Battery

Job ID: 890-2162-1

SDG: 03C1558002

Job ID: 890-2162-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2162-1

#### Receipt

The samples were received on 4/1/2022 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.6°C

#### **GC VOA**

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

#### GC Semi VOA

Method 8015MOD NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-22889 and analytical batch 880-22883 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-22889/1-A). Evidence of matrix interferences is not obvious.

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

#### HPLC/IC

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

# **Client Sample Results**

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery SDG: 03C1558002

**Client Sample ID: PH01** Lab Sample ID: 890-2162-1

Date Collected: 03/30/22 09:30 Date Received: 04/01/22 09:40

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 13:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 13:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 13:03	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/04/22 11:17	04/04/22 13:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 13:03	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/04/22 11:17	04/04/22 13:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130				04/04/22 11:17	04/04/22 13:03	1
1,4-Difluorobenzene (Surr)	89		70 - 130				04/04/22 11:17	04/04/22 13:03	1
Method: Total BTEX - Total BTE	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			04/05/22 14:15	1
Mathada 2015 NM - Diagal Dansa	Owneries (DD	0) (00)							
Method: 8015 NM - Diesel Range Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH			49.8		mg/Kg			04/05/22 09:18	1
	.0.0				99			0 1/00/22 00:10	
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)							
Analyta	Decul	_ ' '							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.8		49.8	MDL	mg/Kg	D	Prepared 04/04/22 08:58	<b>Analyzed</b> 04/04/22 11:48	Dil Fac
Gasoline Range Organics (GRO)-C6-C10		U F1		MDL		<u>D</u>	<u>·</u>		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<49.8	U F1	49.8	MDL	mg/Kg	<u>D</u>	04/04/22 08:58	04/04/22 11:48	1
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1	49.8	MDL	mg/Kg	<u>D</u>	04/04/22 08:58	04/04/22 11:48	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.8 <49.8	U F1 U F1 U	49.8	MDL	mg/Kg	<u>D</u>	04/04/22 08:58 04/04/22 08:58	04/04/22 11:48 04/04/22 11:48	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate	<49.8 <49.8 <49.8	U F1 U F1 U	49.8 49.8 49.8	MDL	mg/Kg	<u>D</u>	04/04/22 08:58 04/04/22 08:58 04/04/22 08:58	04/04/22 11:48 04/04/22 11:48 04/04/22 11:48	1 1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<49.8 <49.8 <49.8 %Recovery	U F1 U F1 U	49.8 49.8 49.8 <i>Limits</i>	MDL	mg/Kg	<u> </u>	04/04/22 08:58 04/04/22 08:58 04/04/22 08:58 Prepared	04/04/22 11:48 04/04/22 11:48 04/04/22 11:48 Analyzed	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Oll Range Organics (Over C28-C36)  Surrogate  1-Chlorooctane	<49.8 <49.8 <49.8 <49.8 <b>%Recovery</b> 96 95	U F1 U F1 U	49.8 49.8 49.8  Limits 70 - 130	MDL	mg/Kg	<u>D</u>	04/04/22 08:58 04/04/22 08:58 04/04/22 08:58 <b>Prepared</b> 04/04/22 08:58	04/04/22 11:48 04/04/22 11:48 04/04/22 11:48 <b>Analyzed</b> 04/04/22 11:48	1 1 1 Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	<49.8 <49.8 <49.8 <b>%Recovery</b> 96 95  omatography -	U F1 U F1 U	49.8 49.8 49.8  Limits 70 - 130	MDL	mg/Kg mg/Kg mg/Kg	<u>D</u>	04/04/22 08:58 04/04/22 08:58 04/04/22 08:58 <b>Prepared</b> 04/04/22 08:58	04/04/22 11:48 04/04/22 11:48 04/04/22 11:48 <b>Analyzed</b> 04/04/22 11:48	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Client Sample ID: PH01A Lab Sample ID: 890-2162-2

Date Collected: 03/30/22 09:50 Date Received: 04/01/22 09:40

Sample Depth: 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 13:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 13:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 13:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 13:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 13:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 13:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130				04/04/22 11:17	04/04/22 13:24	1

**Eurofins Carlsbad** 

**Matrix: Solid** 

Job ID: 890-2162-1

Matrix: Solid

Lab Sample ID: 890-2162-2

Client: Ensolum Project/Site: PLU 158 Battery SDG: 03C1558002

Client Sample ID: PH01A

Date Collected: 03/30/22 09:50 Date Received: 04/01/22 09:40

Sample Depth: 3

Method: 8021B - Volatile Organic Compounds	(GC) (Continued)
Method. 002 1D - Volatile Organic Compounds	(OO) (Oolillillided)

Surrogate	%Recovery Qua	ualifier Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	92	70 - 130	04/04/22 11:17	04/04/22 13:24	1

Mothod:	Total RTEX	- Total BTE	<b>Calculation</b>
welliou.	TOTAL DIEV	- IUIAI DIE	Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	כ	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg		_	04/05/22 14:15	1

Method: 8015 NM - Diesel Range Organics	IUKU	11661

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			04/05/22 09:18	1

Method: 8015B NI	M - Diesel Range	Organics (F	RO) (GC)
Metriou. Ou lab Mi	vi - Diesei Kaliye	Organics (L	iko) (GC)

Analyte	Result	Qualifier	KL	MDL	Unit	U	Prepared	Anaiyzed	DII Fac
Gasoline Range Organics	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 12:53	1
(GRO)-C6-C10 Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 12:53	1
C10-C28) OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 12:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130				04/04/22 08:58	04/04/22 12:53	1

1-Chlorooctane	103	70 - 130
o-Terphenyl	98	70 - 130

o-Terphenyl	98	70 - 130	04/04/22 08:58	04/04/22 12:53	1
Method: 300.0 - Anions, Ion Chromatograph	ny - Soluble				

Analyte	Result Qualifie		MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.0	5.00	mg/Kg			04/05/22 23:19	1

**Client Sample ID: PH01B** Lab Sample ID: 890-2162-3 Matrix: Solid

Date Collected: 03/30/22 10:00 Date Received: 04/01/22 09:40

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 13:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 13:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 13:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 13:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 13:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 13:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				04/04/22 11:17	04/04/22 13:44	1
1,4-Difluorobenzene (Surr)	96		70 - 130				04/04/22 11:17	04/04/22 13:44	1

Method:	Total R	TFY - T	ntal RT	FX Calcu	ılation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		ma/Ka			04/05/22 14:15	1

Method, 00 13 MM - Diesel Mande Ordanics (DIVO) (OC	Method: 8015 NM	- Diesel Ran	ge Organics	(DRO)	(GC
---	-----------------	--------------	-------------	-------	-----

Analyte	Result	Qualifier	RL	MDL I	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	-	mg/Kg			04/05/22 09:18	1

**Matrix: Solid** 

Lab Sample ID: 890-2162-3

# **Client Sample Results**

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery SDG: 03C1558002

**Client Sample ID: PH01B** 

Date Collected: 03/30/22 10:00 Date Received: 04/01/22 09:40

Sample Depth: 4

Method: 8015B NM - Diesel Rang	, ,	, , ,	D.	MDI	1114	_	D	A l	D:: F
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.8	U	49.8		mg/Kg		04/04/22 08:58	04/04/22 13:14	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.8	U	49.8		mg/Kg		04/04/22 08:58	04/04/22 13:14	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/04/22 08:58	04/04/22 13:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130				04/04/22 08:58	04/04/22 13:14	1
o-Terphenyl	104		70 - 130				04/04/22 08:58	04/04/22 13:14	1
- Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	748		4.99		mg/Kg			04/05/22 23:45	1

Lab Sample ID: 890-2162-4 **Client Sample ID: PH01C** 

Date Collected: 03/30/22 10:10

Date Received: 04/01/22 09:40

Sample Depth: 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 14:05	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 14:05	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 14:05	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		04/04/22 11:17	04/04/22 14:05	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 14:05	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		04/04/22 11:17	04/04/22 14:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130				04/04/22 11:17	04/04/22 14:05	1
1,4-Difluorobenzene (Surr)	97		70 - 130				04/04/22 11:17	04/04/22 14:05	1
Method: Total BTEX - Total BTEX	Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			04/05/22 14:15	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/05/22 09:18	1
Method: 8015B NM - Diesel Rang	je Organics (Di	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 13:35	1
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 13:35	1
C10-C28)									
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 13:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130				04/04/22 08:58	04/04/22 13:35	1
o-Terphenyl	111		70 - 130				04/04/22 08:58	04/04/22 13:35	1

# **Client Sample Results**

 Client: Ensolum
 Job ID: 890-2162-1

 Project/Site: PLU 158 Battery
 SDG: 03C1558002

Client Sample ID: PH01C Lab Sample ID: 890-2162-4

Date Collected: 03/30/22 10:10

Date Received: 04/01/22 09:40

Matrix: Solid

Sample Depth: 5

Method: 300.0 - Anions, Ion Chroma	tography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	172		4.95		mg/Kg			04/05/22 23:54	1

Client Sample ID: PH01D

Date Collected: 03/30/22 10:15

Lab Sample ID: 890-2162-5

Matrix: Solid

Date Collected: 03/30/22 10:15 Date Received: 04/01/22 09:40

Sample Depth: 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 14:25	
Toluene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 14:25	
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 14:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 14:25	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 14:25	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 14:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130				04/04/22 11:17	04/04/22 14:25	1
1,4-Difluorobenzene (Surr)	96		70 - 130				04/04/22 11:17	04/04/22 14:25	1
Method: Total BTEX - Total BTEX	( Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/05/22 14:15	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/05/22 09:18	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 13:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 13:57	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 13:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				04/04/22 08:58	04/04/22 13:57	1
o-Terphenyl	95		70 - 130				04/04/22 08:58	04/04/22 13:57	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Pocult	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allalyte	- ixesuit	Qualifici	- INL	IVIDE	Ollit		riepaieu	Analyzea	Diriac

# **Client Sample Results**

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery SDG: 03C1558002

**Client Sample ID: PH02** Lab Sample ID: 890-2162-6

Date Collected: 03/30/22 10:20 Date Received: 04/01/22 09:40

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 14:45	
Toluene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 14:45	
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 14:45	
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		04/04/22 11:17	04/04/22 14:45	
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 14:45	
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		04/04/22 11:17	04/04/22 14:45	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	96		70 - 130				04/04/22 11:17	04/04/22 14:45	
1,4-Difluorobenzene (Surr)	92		70 - 130				04/04/22 11:17	04/04/22 14:45	
Method: Total BTEX - Total BTEX	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00396	U	0.00396		mg/Kg			04/05/22 14:15	
Analyte Total TPH	<49.9	Qualifier U	49.9	WIDE	mg/Kg	D	Prepared	Analyzed 04/05/22 09:18	Dil Fa
			49.9		mg/Kg			04/03/22 09.10	
Method: 8015B NM - Diesel Rang						_			
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 14:18	
• •									
Diesel Range Organics (Over	<49.9	U	49.9		ma/Ka		04/04/22 08:58	04/04/22 14:18	
	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 14:18	
C10-C28)	<49.9 <49.9		49.9 49.9		mg/Kg		04/04/22 08:58 04/04/22 08:58	04/04/22 14:18 04/04/22 14:18	
C10-C28) OII Range Organics (Over C28-C36)		U							
C10-C28) OII Range Organics (Over C28-C36)	<49.9	U	49.9				04/04/22 08:58	04/04/22 14:18	
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	<49.9 <b>%Recovery</b>	U	49.9				04/04/22 08:58  Prepared	04/04/22 14:18  Analyzed	Dil Fa
C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	<49.9  **Recovery 103 104	U Qualifier	49.9  Limits  70 - 130				04/04/22 08:58  Prepared 04/04/22 08:58	04/04/22 14:18  Analyzed  04/04/22 14:18	Dil Fa
C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	<49.9  **Recovery 103 104  omatography -	U Qualifier	49.9  Limits  70 - 130	MDL	mg/Kg	<u>D</u>	04/04/22 08:58  Prepared 04/04/22 08:58	04/04/22 14:18  Analyzed  04/04/22 14:18	Dil Fa

Client Sample ID: PH02A Lab Sample ID: 890-2162-7

Date Collected: 03/30/22 10:35 Date Received: 04/01/22 09:40

Released to Imaging: 5/18/2022 11:45:28 AM

Sample Depth: 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 15:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 15:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 15:06	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		04/04/22 11:17	04/04/22 15:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 15:06	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		04/04/22 11:17	04/04/22 15:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				04/04/22 11:17	04/04/22 15:06	1

**Eurofins Carlsbad** 

Matrix: Solid

 Client: Ensolum
 Job ID: 890-2162-1

 Project/Site: PLU 158 Battery
 SDG: 03C1558002

Client Sample ID: PH02A Lab Sample ID: 890-2162-7

Date Collected: 03/30/22 10:35
Date Received: 04/01/22 09:40
Matrix: Solid

Sample Depth: 3

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	92		70 - 130				04/04/22 11:17	04/04/22 15:06	1
Method: Total BTEX - Total BTE	Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			04/05/22 14:15	1
- Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/05/22 09:18	1
- Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 14:39	1
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 14:39	1
C10-C28)									
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 14:39	1

Method: 300.0 - Anions, Ion Chrom	natography - Soluble						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	218	5.04	mg/Kg			04/06/22 00:37	1

70 - 130

70 - 130

94

<50.0 U

Client Sample ID: PH02B

Date Collected: 03/30/22 10:40

Lab Sample ID: 890-2162-8

Matrix: Solid

Date Received: 04/01/22 09:40

Sample Depth: 4

Total TPH

1-Chlorooctane

o-Terphenyl

		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 15:26	1
<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 15:26	1
<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 15:26	1
<0.00399	U	0.00399		mg/Kg		04/04/22 11:17	04/04/22 15:26	1
<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 15:26	1
<0.00399	U	0.00399		mg/Kg		04/04/22 11:17	04/04/22 15:26	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
108		70 - 130				04/04/22 11:17	04/04/22 15:26	1
98		70 - 130				04/04/22 11:17	04/04/22 15:26	1
EX Calculation								
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<0.00399	U	0.00399		mg/Kg			04/05/22 14:15	1
	<0.00200 <0.00200 <0.00399 <0.00399 <0.00399  **Recovery** 108 98  EX Calculation Result	<0.00200 U <0.00200 U <0.00399 U <0.00399 U <0.00399 U <0.00399 U  **Recovery Qualifier**  108 98  EX Calculation Result Qualifier	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200

**Eurofins Carlsbad** 

04/05/22 09:18

04/04/22 08:58

04/04/22 08:58

04/04/22 14:39

04/04/22 14:39

50.0

mg/Kg

Job ID: 890-2162-1

Client: Ensolum Project/Site: PLU 158 Battery SDG: 03C1558002

**Client Sample ID: PH02B** 

Lab Sample ID: 890-2162-8 Date Collected: 03/30/22 10:40 Matrix: Solid Date Received: 04/01/22 09:40

Sample Depth: 4

Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 15:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 15:01	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 15:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130				04/04/22 08:58	04/04/22 15:01	1
o-Terphenyl	107		70 - 130				04/04/22 08:58	04/04/22 15:01	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.05		4.97		mg/Kg			04/06/22 00:46	1

Lab Sample ID: 890-2162-9 **Client Sample ID: PH02C Matrix: Solid** 

Date Collected: 03/30/22 10:45

Date Received: 04/01/22 09:40

Sample Depth: 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 15:47	1
Toluene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 15:47	1
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 15:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 15:47	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 15:47	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 15:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130				04/04/22 11:17	04/04/22 15:47	1
1,4-Difluorobenzene (Surr)	103		70 - 130				04/04/22 11:17	04/04/22 15:47	1
Method: Total BTEX - Total BTEX	Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/05/22 14:15	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			04/05/22 09:18	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 15:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 15:22	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 15:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				04/04/22 08:58	04/04/22 15:22	1
o-Terphenyl	95		70 - 130				04/04/22 08:58	04/04/22 15:22	1

Job ID: 890-2162-1

Client: Ensolum Project/Site: PLU 158 Battery SDG: 03C1558002

**Client Sample ID: PH02C** Lab Sample ID: 890-2162-9

Date Collected: 03/30/22 10:45 Matrix: Solid Date Received: 04/01/22 09:40

Sample Depth: 5

Method: 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result Qua	alifier RL	MDL Un	it D	Prepared	Analyzed	Dil Fac		
	Chloride	60.0	4.99	mg	ı/Kg		04/06/22 00:55	1		

Client Sample ID: PH02D Lab Sample ID: 890-2162-10 **Matrix: Solid** 

Date Collected: 03/30/22 11:00 Date Received: 04/01/22 09:40

Sample Depth: 6

Analyte

Chloride

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 16:07	
Toluene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 16:07	
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 16:07	
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 16:07	
o-Xylene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 16:07	
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 16:07	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	108		70 - 130				04/04/22 11:17	04/04/22 16:07	
1,4-Difluorobenzene (Surr)	92		70 - 130				04/04/22 11:17	04/04/22 16:07	
Method: Total BTEX - Total BTEX	Calculation								
					Unit	D	Prepared	Analyzed	Dil Fa
Analyte	Result	Qualifier	RL	MDL	Ollit		Frepareu	Allalyzeu	
Analyte Total BTEX	<0.00398		0.00398	MDL	mg/Kg	=		04/05/22 14:15	
	<0.00398	U		MDL			Frepareu		
Total BTEX	<0.00398 Organics (DR	U		MDL	mg/Kg		Prepared		
Total BTEX  Method: 8015 NM - Diesel Range	<0.00398 Organics (DR	O) (GC) Qualifier	0.00398		mg/Kg		<u> </u>	04/05/22 14:15	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte	<0.00398  Organics (DR Result <50.0	O) (GC) Qualifier	0.00398		mg/Kg		<u> </u>	04/05/22 14:15  Analyzed	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH	<0.00398  Organics (DR Result <50.0  ge Organics (D	O) (GC) Qualifier	0.00398		mg/Kg  Unit mg/Kg		<u> </u>	04/05/22 14:15  Analyzed	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH  Method: 8015B NM - Diesel Range	<0.00398  Organics (DR Result <50.0  ge Organics (D	O) (GC) Qualifier U  RO) (GC) Qualifier	0.00398  RL  50.0	MDL	mg/Kg  Unit mg/Kg	<u>D</u>	Prepared	04/05/22 14:15  Analyzed 04/05/22 09:18	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH  Method: 8015B NM - Diesel Range Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<0.00398  Organics (DR Result <50.0  ge Organics (D Result	U O) (GC) Qualifier U RO) (GC) Qualifier U	0.00398  RL  50.0	MDL	mg/Kg  Unit mg/Kg  Unit	<u>D</u>	Prepared Prepared	04/05/22 14:15  Analyzed  04/05/22 09:18  Analyzed	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH  Method: 8015B NM - Diesel Range Analyte  Gasoline Range Organics (GRO)-C6-C10	<0.00398  Organics (DR Result <50.0  ge Organics (D Result <50.0	U O) (GC) Qualifier U RO) (GC) Qualifier U	0.00398  RL  50.0  RL  50.0	MDL	mg/Kg  Unit mg/Kg  Unit mg/Kg	<u>D</u>	Prepared  Prepared  04/04/22 08:58	04/05/22 14:15  Analyzed 04/05/22 09:18  Analyzed 04/04/22 15:44	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH  Method: 8015B NM - Diesel Range Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<0.00398  Organics (DR  Result  <50.0  ge Organics (D  Result  <50.0  <50.0	U O) (GC) Qualifier U RO) (GC) Qualifier U U U	0.00398  RL 50.0  RL 50.0	MDL	mg/Kg  Unit mg/Kg  Unit mg/Kg mg/Kg	<u>D</u>	Prepared  Prepared  04/04/22 08:58  04/04/22 08:58	04/05/22 14:15  Analyzed 04/05/22 09:18  Analyzed 04/04/22 15:44 04/04/22 15:44	Dil Fac
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH  Method: 8015B NM - Diesel Range Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)	<0.00398  Organics (DR  Result  <50.0  ge Organics (D  Result  <50.0  <50.0  <50.0	U O) (GC) Qualifier U RO) (GC) Qualifier U U U	0.00398  RL 50.0  RL 50.0  50.0	MDL	mg/Kg  Unit mg/Kg  Unit mg/Kg mg/Kg	<u>D</u>	Prepared  Prepared  04/04/22 08:58  04/04/22 08:58	Analyzed 04/05/22 15:44 04/04/22 15:44	Dil Fa

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Analyzed 04/06/22 01:03

RL

5.00

MDL Unit

mg/Kg

D

Prepared

Result Qualifier

114

Dil Fac

Lab Sample ID: 890-2162-11

# **Client Sample Results**

Client: Ensolum Job ID: 890-2162-1
Project/Site: PLU 158 Battery SDG: 03C1558002

Client Sample ID: PH03

Date Collected: 03/30/22 11:10 Date Received: 04/01/22 09:40

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 17:58	
Toluene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 17:58	
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 17:58	
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/04/22 11:17	04/04/22 17:58	
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 17:58	•
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/04/22 11:17	04/04/22 17:58	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	94		70 - 130				04/04/22 11:17	04/04/22 17:58	
1,4-Difluorobenzene (Surr)	106		70 - 130				04/04/22 11:17	04/04/22 17:58	
Method: Total BTEX - Total BTEX	( Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00399	U	0.00399		mg/Kg			04/05/22 14:15	
Total TPH	<50.0	U	50.0		mg/Kg			04/05/22 09:18	
Total TPH	<50.0	U	50.0		mg/Kg			04/05/22 09:18	•
Method: 8015B NM - Diesel Rang									
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 16:27	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 16:27	
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 16:27	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	100		70 - 130				04/04/22 08:58	04/04/22 16:27	
o-Terphenyl	97		70 - 130				04/04/22 08:58	04/04/22 16:27	
Method: 300.0 - Anions, Ion Chro	0 . ,								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	<4.97		4.97		mg/Kg				

Client Sample ID: PH03A Lab Sample ID: 890-2162-12

Date Collected: 03/30/22 11:30 Date Received: 04/01/22 09:40

Sample Depth: 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 18:18	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 18:18	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 18:18	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 18:18	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 18:18	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 18:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				04/04/22 11:17	04/04/22 18:18	

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Matrix: Solid

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery SDG: 03C1558002

Client Sample ID: PH03A Lab Sample ID: 890-2162-12

Date Collected: 03/30/22 11:30 Matrix: Solid Date Received: 04/01/22 09:40

Sample Depth: 3

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	89	70 - 130	04/04/22 11:17	04/04/22 18:18	1

#### **Method: Total BTEX - Total BTEX Calculation**

Analyte	Result	Qualifier	RL	MDL	Unit	)	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg		_	04/05/22 14:15	1

Method: 8015 NM - Diesel Range Organics (I	DRO)	(GC)
method. of to this - Dieser Range Organics (i	יוטוט	(00)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/05/22 09:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 16:48	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 16:48	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

1-Chlorooctane	100	70 - 130	
o-Terphenyl	107	70 - 130	

Mathada 200 0 Aniana Jan Chuana	An amanda Only bla				
o-Terphenyl	107	70 - 130	04/04/22 08:58	04/04/22 16:48	1
1-Chlorooctane	100	70 _ 130	04/04/22 08:58	04/04/22 16:48	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	393	5.00	mg/Kg		_	04/07/22 08:56	1

Client Sample ID: PH03B Lab Sample ID: 890-2162-13 Date Collected: 03/30/22 11:40 **Matrix: Solid** 

Date Received: 04/01/22 09:40

Sample Depth: 4

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Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 18:39	1	
<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 18:39	1	
<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 18:39	1	
<0.00399	U	0.00399		mg/Kg		04/04/22 11:17	04/04/22 18:39	1	
<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 18:39	1	
<0.00399	U	0.00399		mg/Kg		04/04/22 11:17	04/04/22 18:39	1	
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
110		70 - 130				04/04/22 11:17	04/04/22 18:39	1	
91		70 - 130				04/04/22 11:17	04/04/22 18:39	1	
	Result   <0.00200   <0.00200   <0.00200   <0.00200   <0.00399   <0.00200   <0.00399   <0.00399	Result   Qualifier	Result   Qualifier   RL	Result   Qualifier   RL   MDL	Result         Qualifier         RL         MDL         Unit           <0.00200	Result         Qualifier         RL         MDL         Unit         D           <0.00200	Result         Qualifier         RL         MDL         Unit         D         Prepared           <0.00200	Result Qualifier         RL         MDL Unit         D mg/Kg         Prepared 04/04/22 11:17 04/04/22 18:39           <0.00200 U	

#### **Method: Total BTEX - Total BTEX Calculation**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			04/05/22 14:15	1

н	Marker J. COAP NIM Diana	I Damma Ommaniaa /		$\sim$
ı	Method: 8015 NM - Diese	i Rande Ordanics i	DRUNG	(-(.)
н	Michigal Colo Min Bicco	i italigo Olgaliloo (	D. ( ) (	,

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/05/22 09:18	1

Lab Sample ID: 890-2162-13

# **Client Sample Results**

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery SDG: 03C1558002

**Client Sample ID: PH03B** 

Date Collected: 03/30/22 11:40 Date Received: 04/01/22 09:40

Sample Depth: 4

Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 17:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 17:10	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 17:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130				04/04/22 08:58	04/04/22 17:10	1
o-Terphenyl	99		70 - 130				04/04/22 08:58	04/04/22 17:10	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	666		5.00		mg/Kg			04/07/22 09:23	1

**Client Sample ID: PH03C** Lab Sample ID: 890-2162-14 Matrix: Solid

Date Collected: 03/30/22 11:50

Date Received: 04/01/22 09:40

Sample Depth: 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 18:59	1
Toluene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 18:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 18:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 18:59	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 18:59	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 18:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130				04/04/22 11:17	04/04/22 18:59	1
1,4-Difluorobenzene (Surr)	101		70 - 130				04/04/22 11:17	04/04/22 18:59	1
Method: Total BTEX - Total BTEX	Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/05/22 14:15	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			04/05/22 09:18	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 17:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 17:31	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 17:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130				04/04/22 08:58	04/04/22 17:31	1
o-Terphenyl	98		70 - 130				04/04/22 08:58	04/04/22 17:31	1

Job ID: 890-2162-1

Matrix: Solid

Lab Sample ID: 890-2162-14

Client: Ensolum Project/Site: PLU 158 Battery SDG: 03C1558002

**Client Sample ID: PH03C** 

Date Collected: 03/30/22 11:50 Date Received: 04/01/22 09:40

Sample Depth: 5

Method: 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	278		4.99		mg/Kg			04/07/22 09:31	1	

**Client Sample ID: PH03D** Lab Sample ID: 890-2162-15 Matrix: Solid

Date Collected: 03/30/22 12:00 Date Received: 04/01/22 09:40

Sample Depth: 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 19:20	
Toluene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 19:20	•
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 19:20	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 19:20	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 19:20	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 19:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130				04/04/22 11:17	04/04/22 19:20	1
1,4-Difluorobenzene (Surr)	95		70 - 130				04/04/22 11:17	04/04/22 19:20	1
Method: Total BTEX - Total BTEX	Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/05/22 14:15	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/05/22 09:18	1
Method: 8015B NM - Diesel Rang	je Organics (Di	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 17:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 17:52	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 17:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				04/04/22 08:58	04/04/22 17:52	1
o-Terphenyl	93		70 - 130				04/04/22 08:58	04/04/22 17:52	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	20.5		4.95		mg/Kg			04/07/22 09:40	1

## **Client Sample Results**

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery SDG: 03C1558002

**Client Sample ID: PH04** Lab Sample ID: 890-2162-16

Date Collected: 03/30/22 12:10 Matrix: Solid Date Received: 04/01/22 09:40

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 19:40	
Toluene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 19:40	
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 19:40	
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		04/04/22 11:17	04/04/22 19:40	
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/04/22 11:17	04/04/22 19:40	
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		04/04/22 11:17	04/04/22 19:40	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	115		70 - 130				04/04/22 11:17	04/04/22 19:40	
1,4-Difluorobenzene (Surr)	99		70 - 130				04/04/22 11:17	04/04/22 19:40	
Method: Total BTEX - Total BTEX	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00397	U	0.00397		mg/Kg			04/05/22 14:15	-
Analyte Total TPH	<50.0	Qualifier U			mg/Kg	D	Prepared	Analyzed 04/05/22 09:18	Dil F
			30.0		mg/Kg			04/03/22 09.10	
Method: 8015B NM - Diesel Rang									
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 18:14	
	<50.0	U	50.0		ma/Ka		04/04/22 08:58	04/04/22 18:14	
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 18:14	
Diesel Range Organics (Over C10-C28)	<50.0 <50.0		50.0 50.0		mg/Kg		04/04/22 08:58 04/04/22 08:58	04/04/22 18:14 04/04/22 18:14	
Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)		U							Dil F
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	<50.0	U	50.0				04/04/22 08:58	04/04/22 18:14	Dil F
Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	<50.0	U	50.0 <i>Limits</i>				04/04/22 08:58  Prepared	04/04/22 18:14  Analyzed	Dil F
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<50.0  **Recovery 92 89	U Qualifier	50.0  Limits  70 - 130				04/04/22 08:58  Prepared 04/04/22 08:58	04/04/22 18:14  Analyzed  04/04/22 18:14	Dil F
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate  1-Chlorooctane o-Terphenyl	<50.0  **Recovery 92 89  omatography -	U Qualifier	50.0  Limits  70 - 130	MDL	mg/Kg	D	04/04/22 08:58  Prepared 04/04/22 08:58	04/04/22 18:14  Analyzed  04/04/22 18:14	Dil Fa

Client Sample ID: PH04A Lab Sample ID: 890-2162-17

Date Collected: 03/30/22 12:30 Date Received: 04/01/22 09:40

Sample Depth: 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:01	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 20:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 20:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				04/04/22 11:17	04/04/22 20:01	1

**Eurofins Carlsbad** 

Matrix: Solid

Job ID: 890-2162-1

Client: Ensolum SDG: 03C1558002 Project/Site: PLU 158 Battery

Client Sample ID: PH04A Lab Sample ID: 890-2162-17 Matrix: Solid

Date Collected: 03/30/22 12:30 Date Received: 04/01/22 09:40 Sample Depth: 3

Method: 8021B - Volatile C	Organic Compou	inds (GC)	(Continued)
Metriou. 002 ID - Volatile C	Ji gariic Compou	ilius (OC)	(Continueu)

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	100	70 - 130	04/04/22 11:17	04/04/22 20:01	1

### **Method: Total BTEX - Total BTEX Calculation**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/05/22 14:15	1

Mothod: 8015 NM -	Diosal Range	Organice	(DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	F	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg				04/05/22 09:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 18:35	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 18:35	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 18:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96	70 - 130	04/04/22 08:58	04/04/22 18:35	1
o-Terphenyl	98	70 - 130	04/04/22 08:58	04/04/22 18:35	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte		Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 L	J	5.00	mg/Kg			04/07/22 10:07	1

Client Sample ID: PH04B Lab Sample ID: 890-2162-18 **Matrix: Solid** 

Date Collected: 03/30/22 12:40 Date Received: 04/01/22 09:40

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:21	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:21	1
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:21	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 20:21	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:21	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 20:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130				04/04/22 11:17	04/04/22 20:21	1
1,4-Difluorobenzene (Surr)	98		70 - 130				04/04/22 11:17	04/04/22 20:21	1

#### **Method: Total BTEX - Total BTEX Calculation**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		ma/Ka			04/05/22 14:15	1

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/05/22 09:18	1

Matrix: Solid

Lab Sample ID: 890-2162-18

## **Client Sample Results**

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery SDG: 03C1558002

Client Sample ID: PH04B

Date Collected: 03/30/22 12:40 Date Received: 04/01/22 09:40

Sample Depth: 4

Method: 8015B NM - Diesel Rang	, ,	, , ,							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 18:56	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 18:56	1
C10-C28)									
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/04/22 08:58	04/04/22 18:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130				04/04/22 08:58	04/04/22 18:56	1
o-Terphenyl	97		70 - 130				04/04/22 08:58	04/04/22 18:56	1
- Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.71		4.97		mg/Kg			04/07/22 10:16	1

Lab Sample ID: 890-2162-19 **Client Sample ID: PH04C** Matrix: Solid

Date Collected: 03/30/22 12:50 Date Received: 04/01/22 09:40

Sample Depth: 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:41	1
Toluene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:41	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 20:41	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		04/04/22 11:17	04/04/22 20:41	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/04/22 11:17	04/04/22 20:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130				04/04/22 11:17	04/04/22 20:41	1
1,4-Difluorobenzene (Surr)	101		70 - 130				04/04/22 11:17	04/04/22 20:41	1
Method: Total BTEX - Total BTEX	Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/05/22 14:15	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/05/22 09:18	1
Method: 8015B NM - Diesel Rang	je Organics (Di	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 19:17	1
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 19:17	1
C10-C28)									
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 19:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130				04/04/22 08:58	04/04/22 19:17	1
o-Terphenyl	102		70 - 130				04/04/22 08:58	04/04/22 19:17	1

Matrix: Solid

Lab Sample ID: 890-2162-19

Job ID: 890-2162-1

Client: Ensolum Project/Site: PLU 158 Battery SDG: 03C1558002

**Client Sample ID: PH04C** 

Date Collected: 03/30/22 12:50 Date Received: 04/01/22 09:40

Sample Depth: 5

Method: 300.0 - Anions, Ion Chromatography - Soluble											
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	<5.00	U	5.00		mg/Kg			04/07/22 10:24	1		

**Client Sample ID: PH04D** Lab Sample ID: 890-2162-20 Matrix: Solid

Date Collected: 03/30/22 13:00 Date Received: 04/01/22 09:40

Method: 8021B - Volatile Organic	Compounds (	GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 21:02	
Toluene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 21:02	
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 21:02	
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/04/22 11:17	04/04/22 21:02	
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 21:02	
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/04/22 11:17	04/04/22 21:02	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	108		70 - 130				04/04/22 11:17	04/04/22 21:02	
1,4-Difluorobenzene (Surr)	97		70 - 130				04/04/22 11:17	04/04/22 21:02	
Method: Total BTEX - Total BTEX	Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00399	U	0.00399		mg/Kg			04/05/22 14:15	
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0		mg/Kg			04/05/22 09:18	
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 19:39	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 19:39	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 19:39	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	100		70 - 130				04/04/22 08:58	04/04/22 19:39	
o-Terphenyl	97		70 - 130				04/04/22 08:58	04/04/22 19:39	
Method: 300.0 - Anions, Ion Chro	matography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa

## **Surrogate Summary**

Client: Ensolum Job ID: 890-2162-1
Project/Site: PLU 158 Battery SDG: 03C1558002

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	Percent Surrogate Recovery (Acceptance Limits
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2162-1	PH01	111	89	
890-2162-1 MS	PH01	107	96	
890-2162-1 MSD	PH01	108	91	
890-2162-2	PH01A	108	92	
890-2162-3	PH01B	111	96	
390-2162-4	PH01C	110	97	
390-2162-5	PH01D	106	96	
390-2162-6	PH02	96	92	
390-2162-7	PH02A	112	92	
890-2162-8	PH02B	108	98	
390-2162-9	PH02C	131 S1+	103	
390-2162-10	PH02D	108	92	
890-2162-11	PH03	94	106	
890-2162-12	PH03A	112	89	
390-2162-13	PH03B	110	91	
390-2162-14	PH03C	74	101	
390-2162-15	PH03D	117	95	
390-2162-16	PH04	115	99	
390-2162-17	PH04A	111	100	
390-2162-18	PH04B	110	98	
390-2162-19	PH04C	110	101	
390-2162-20	PH04D	108	97	
_CS 880-22921/1-A	Lab Control Sample	99	100	
_CSD 880-22921/2-A	Lab Control Sample Dup	100	97	
MB 880-22921/5-A	Method Blank	98	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 Limit
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2162-1	PH01	96	95	
890-2162-1 MS	PH01	113	96	
390-2162-1 MSD	PH01	130	112	
390-2162-2	PH01A	103	98	
390-2162-3	PH01B	98	104	
390-2162-4	PH01C	108	111	
390-2162-5	PH01D	96	95	
390-2162-6	PH02	103	104	
390-2162-7	PH02A	94	94	
390-2162-8	PH02B	106	107	
390-2162-9	PH02C	94	95	
390-2162-10	PH02D	99	96	
390-2162-11	PH03	100	97	
890-2162-12	PH03A	100	107	

## **Surrogate Summary**

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery SDG: 03C1558002

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2162-13	PH03B	97	99	
890-2162-14	PH03C	97	98	
890-2162-15	PH03D	96	93	
890-2162-16	PH04	92	89	
890-2162-17	PH04A	96	98	
890-2162-18	PH04B	98	97	
890-2162-19	PH04C	98	102	
890-2162-20	PH04D	100	97	
LCS 880-22889/2-A	Lab Control Sample	107	95	
LCSD 880-22889/3-A	Lab Control Sample Dup	114	101	
MB 880-22889/1-A	Method Blank	132 S1+	139 S1+	

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2162-1 SDG: 03C1558002 Project/Site: PLU 158 Battery

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-22921/5-A

**Matrix: Solid** Analysis Batch: 22890

MD MD

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 22921

ı		MB	MB							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Benzene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 12:35	1
	Toluene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 12:35	1
	Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 12:35	1
I	m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/04/22 11:17	04/04/22 12:35	1
I	o-Xylene	<0.00200	U	0.00200		mg/Kg		04/04/22 11:17	04/04/22 12:35	1
	Xylenes, Total	< 0.00400	U	0.00400		mg/Kg		04/04/22 11:17	04/04/22 12:35	1
ı										

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	04/04/22 11:17	04/04/22 12:35	1
1,4-Difluorobenzene (Surr)	93		70 - 130	04/04/22 11:17	04/04/22 12:35	1

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 880-22921/1-A

LCS LCS

Matrix: Solid

Analysis Batch: 22890

Prep Type: Total/NA

Prep Batch: 22921

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09390		mg/Kg		94	70 - 130	
Toluene	0.100	0.1079		mg/Kg		108	70 - 130	
Ethylbenzene	0.100	0.1135		mg/Kg		114	70 - 130	
m-Xylene & p-Xylene	0.200	0.2273		mg/Kg		114	70 - 130	
o-Xylene	0.100	0.1106		mg/Kg		111	70 - 130	

Spike

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-22921/2-A

Matrix: Solid

Analysis Batch: 22890

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 22921

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09226		mg/Kg		92	70 - 130	2	35
Toluene	0.100	0.1049		mg/Kg		105	70 - 130	3	35
Ethylbenzene	0.100	0.1125		mg/Kg		113	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2267		mg/Kg		113	70 - 130	0	35
o-Xylene	0.100	0.1096		mg/Kg		110	70 - 130	1	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	100	70 - 130
1,4-Difluorobenzene (Surr)	97	70 - 130

Lab Sample ID: 890-2162-1 MS

Matrix: Solid

Analysis Batch: 22890

**Client Sample ID: PH01** Prep Type: Total/NA

Prep Batch: 22921

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0998	0.1050		mg/Kg		105	70 - 130	
Toluene	<0.00200	U	0.0998	0.1235		mg/Kg		124	70 - 130	

### QC Sample Results

Client: Ensolum Job ID: 890-2162-1 SDG: 03C1558002 Project/Site: PLU 158 Battery

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

Lab Sample ID: 890-2162-1 MS **Client Sample ID: PH01 Matrix: Solid** Prep Type: Total/NA Analysis Batch: 22890 Prep Batch: 22921

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00200	U	0.0998	0.1224		mg/Kg		123	70 - 130	
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2577		mg/Kg		129	70 - 130	
o-Xylene	<0.00200	U	0.0998	0.1202		mg/Kg		120	70 - 130	

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 70 - 130 107 1,4-Difluorobenzene (Surr) 70 - 130 96

Lab Sample ID: 890-2162-1 MSD **Matrix: Solid** 

Analysis Batch: 22890

Analysis Batch: 22890									Prep	Batch:	22921
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.100	0.09908		mg/Kg		99	70 - 130	6	35
Toluene	<0.00200	U	0.100	0.1220		mg/Kg		122	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.100	0.1249		mg/Kg		124	70 - 130	2	35
m-Xylene & p-Xylene	<0.00399	U	0.201	0.2606		mg/Kg		130	70 - 130	1	35
o-Xylene	<0.00200	U	0.100	0.1196		mg/Kg		119	70 - 130	1	35

MSD MSD Surrogate %Recovery Qualifier Limits 70 - 130 4-Bromofluorobenzene (Surr) 108 1,4-Difluorobenzene (Surr) 91 70 - 130

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

Lab Sample ID: MB 880-22889/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA Prep Batch: 22889

Analysis Batch: 22883

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 10:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 10:45	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/04/22 08:58	04/04/22 10:45	1

	MB	MB				
Surrogate 9	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	132	S1+	70 - 130	04/04/22 08:58	04/04/22 10:45	1
o-Terphenyl	139	S1+	70 - 130	04/04/22 08:58	04/04/22 10:45	1

Lab Sample ID: LCS 880-22889/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA

**Analysis Batch: 22883** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	921.9		mg/Kg		92	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	972.3		mg/Kg		97	70 _ 130	
C10-C28)								

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Prep Batch: 22889

**Client Sample ID: PH01** 

Prep Type: Total/NA

Job ID: 890-2162-1

Client: Ensolum Project/Site: PLU 158 Battery SDG: 03C1558002

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

LCS LCS

%Recovery Qualifier

107

Lab Sample ID: LCS 880-22889/2-A

Limits

70 - 130

70 - 130

**Matrix: Solid** 

**Analysis Batch: 22883** 

**Analysis Batch: 22883** 

Surrogate

1-Chlorooctane

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

Prep Batch: 22889

o-Terphenyl 95

Lab Sample ID: LCSD 880-22889/3-A

**Matrix: Solid** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 22889

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 1000 836.6 84 70 - 13010 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 918.4 92 mg/Kg 70 - 1306 20 C10-C28)

LCSD LCSD

Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 114 101 70 - 130 o-Terphenyl

Lab Sample ID: 890-2162-1 MS **Client Sample ID: PH01 Matrix: Solid** 

**Analysis Batch: 22883** 

Prep Type: Total/NA

Prep Batch: 22889

Sample Sample Spike Analyte Added Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <49.8 U F1 998 1188 mg/Kg 119 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.8 UF1 998 1122 mg/Kg 112 70 - 130

MS MS

C10-C28)

MS MS %Recovery Qualifier Limits Surrogate 70 - 130 1-Chlorooctane 113 70 - 130 o-Terphenyl 96

Lab Sample ID: 890-2162-1 MSD **Client Sample ID: PH01** 

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

Analysis Batch: 22883 Prep Batch: 22889 Sample Sample MSD MSD %Rec RPD Spike

Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit U F1 998 1406 F1 Gasoline Range Organics <49.8 mg/Kg 141 70 - 130 17 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.8 UF1 998 1343 F1 mg/Kg 135 70 - 130 18 20

C10-C28)

MSD MSD

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	130	70 - 130
o-Terphenyl	112	70 - 130

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

**Prep Type: Soluble** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

Client Sample ID: PH01A

Client Sample ID: PH01A
Prep Type: Soluble

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

**Prep Type: Soluble** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

 Client: Ensolum
 Job ID: 890-2162-1

 Project/Site: PLU 158 Battery
 SDG: 03C1558002

**Method: 300.0 - Anions, Ion Chromatography** 

Lab Sample ID: MB 880-22962/1-A

Matrix: Solid

Analysis Batch: 23035

MB MB

 Analyte
 Result
 Qualifier
 RL
 MDL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Chloride
 <5.00</td>
 U
 5.00
 mg/Kg
 04/05/22 20:51
 1

Lab Sample ID: LCS 880-22962/2-A

Matrix: Solid

**Analysis Batch: 23035** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 254.9 mg/Kg 102 90 - 110

Lab Sample ID: LCSD 880-22962/3-A

Matrix: Solid

**Analysis Batch: 23035** 

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 250.6 250 mg/Kg 100 90 - 110

Lab Sample ID: 890-2162-2 MS

Matrix: Solid

**Analysis Batch: 23035** 

MS MS Sample Sample Spike %Rec Added %Rec Analyte Result Qualifier Result Qualifier Unit D Limits Chloride 25.0 250 272.9 90 - 110 mg/Kg

Lab Sample ID: 890-2162-2 MSD

Matrix: Solid

**Analysis Batch: 23035** 

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 25.0 250 270.9 mg/Kg 98 90 - 110

Lab Sample ID: MB 880-22977/1-A

Matrix: Solid

**Analysis Batch: 23045** 

MB MB

 Analyte
 Result Chloride
 Qualifier
 RL MDL Unit
 D Prepared
 Analyzed Dil Fac

 Chloride
 <5.00 U</td>
 5.00 mg/Kg
 04/07/22 08:29
 1

Lab Sample ID: LCS 880-22977/2-A

Matrix: Solid

Analysis Batch: 23045

 Spike
 LCS
 LCS
 %Rec

 Analyte
 Added
 Result
 Qualifier
 Unit
 D
 %Rec
 Limits

 Chloride
 250
 244.7
 mg/Kg
 98
 90 - 110

Lab Sample ID: LCSD 880-22977/3-A

Released to Imaging: 5/18/2022 11:45:28 AM

Matrix: Solid

**Analysis Batch: 23045** 

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Chloride 250 244.9 mg/Kg 98 90 - 110 20

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## **QC Sample Results**

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery

SDG: 03C1558002

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-2162-12 MS Client Sample ID: PH03A **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 23045

-	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	393		250	635.1		ma/Ka		97	90 - 110		-

Lab Sample ID: 890-2162-12 MSD Client Sample ID: PH03A **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 23045

Sample Sample Spike MSD MSD %Rec RPD Limit Analyte Result Qualifier Added Result Qualifier Limits RPD Unit %Rec Chloride 90 - 110 393 250 628.4 mg/Kg 94

**Eurofins Carlsbad** 

Released to Imaging: 5/18/2022 11:45:28 AM

 Client: Ensolum
 Job ID: 890-2162-1

 Project/Site: PLU 158 Battery
 SDG: 03C1558002

**GC VOA** 

**Analysis Batch: 22890** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2162-1	PH01	Total/NA	Solid	8021B	22921
890-2162-2	PH01A	Total/NA	Solid	8021B	22921
890-2162-3	PH01B	Total/NA	Solid	8021B	22921
890-2162-4	PH01C	Total/NA	Solid	8021B	22921
890-2162-5	PH01D	Total/NA	Solid	8021B	22921
890-2162-6	PH02	Total/NA	Solid	8021B	22921
890-2162-7	PH02A	Total/NA	Solid	8021B	22921
890-2162-8	PH02B	Total/NA	Solid	8021B	22921
890-2162-9	PH02C	Total/NA	Solid	8021B	22921
890-2162-10	PH02D	Total/NA	Solid	8021B	22921
890-2162-11	PH03	Total/NA	Solid	8021B	22921
890-2162-12	PH03A	Total/NA	Solid	8021B	22921
890-2162-13	PH03B	Total/NA	Solid	8021B	22921
890-2162-14	PH03C	Total/NA	Solid	8021B	22921
890-2162-15	PH03D	Total/NA	Solid	8021B	22921
890-2162-16	PH04	Total/NA	Solid	8021B	22921
890-2162-17	PH04A	Total/NA	Solid	8021B	22921
890-2162-18	PH04B	Total/NA	Solid	8021B	22921
890-2162-19	PH04C	Total/NA	Solid	8021B	22921
890-2162-20	PH04D	Total/NA	Solid	8021B	22921
MB 880-22921/5-A	Method Blank	Total/NA	Solid	8021B	22921
LCS 880-22921/1-A	Lab Control Sample	Total/NA	Solid	8021B	22921
LCSD 880-22921/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	22921
890-2162-1 MS	PH01	Total/NA	Solid	8021B	22921
890-2162-1 MSD	PH01	Total/NA	Solid	8021B	22921

Prep Batch: 22921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-2162-1	PH01	Total/NA	Solid	5035	
890-2162-2	PH01A	Total/NA	Solid	5035	
890-2162-3	PH01B	Total/NA	Solid	5035	
890-2162-4	PH01C	Total/NA	Solid	5035	
890-2162-5	PH01D	Total/NA	Solid	5035	
890-2162-6	PH02	Total/NA	Solid	5035	
890-2162-7	PH02A	Total/NA	Solid	5035	
890-2162-8	PH02B	Total/NA	Solid	5035	
890-2162-9	PH02C	Total/NA	Solid	5035	
890-2162-10	PH02D	Total/NA	Solid	5035	
890-2162-11	PH03	Total/NA	Solid	5035	
890-2162-12	PH03A	Total/NA	Solid	5035	
890-2162-13	PH03B	Total/NA	Solid	5035	
890-2162-14	PH03C	Total/NA	Solid	5035	
890-2162-15	PH03D	Total/NA	Solid	5035	
890-2162-16	PH04	Total/NA	Solid	5035	
890-2162-17	PH04A	Total/NA	Solid	5035	
890-2162-18	PH04B	Total/NA	Solid	5035	
890-2162-19	PH04C	Total/NA	Solid	5035	
890-2162-20	PH04D	Total/NA	Solid	5035	
MB 880-22921/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-22921/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-22921/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Client: Ensolum

Project/Site: PLU 158 Battery

Job ID: 890-2162-1 SDG: 03C1558002

## **GC VOA (Continued)**

### Prep Batch: 22921 (Continued)

	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
	890-2162-1 MS	PH01	Total/NA	Solid	5035	
Į	890-2162-1 MSD	PH01	Total/NA	Solid	5035	

#### **Analysis Batch: 23037**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2162-1	PH01	Total/NA	Solid	Total BTEX	-
890-2162-2	PH01A	Total/NA	Solid	Total BTEX	
890-2162-3	PH01B	Total/NA	Solid	Total BTEX	
890-2162-4	PH01C	Total/NA	Solid	Total BTEX	
890-2162-5	PH01D	Total/NA	Solid	Total BTEX	
890-2162-6	PH02	Total/NA	Solid	Total BTEX	
890-2162-7	PH02A	Total/NA	Solid	Total BTEX	
890-2162-8	PH02B	Total/NA	Solid	Total BTEX	
890-2162-9	PH02C	Total/NA	Solid	Total BTEX	
890-2162-10	PH02D	Total/NA	Solid	Total BTEX	
890-2162-11	PH03	Total/NA	Solid	Total BTEX	
890-2162-12	PH03A	Total/NA	Solid	Total BTEX	
890-2162-13	PH03B	Total/NA	Solid	Total BTEX	
890-2162-14	PH03C	Total/NA	Solid	Total BTEX	
890-2162-15	PH03D	Total/NA	Solid	Total BTEX	
890-2162-16	PH04	Total/NA	Solid	Total BTEX	
890-2162-17	PH04A	Total/NA	Solid	Total BTEX	
890-2162-18	PH04B	Total/NA	Solid	Total BTEX	
890-2162-19	PH04C	Total/NA	Solid	Total BTEX	
890-2162-20	PH04D	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

#### **Analysis Batch: 22883**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2162-1	PH01	Total/NA	Solid	8015B NM	22889
890-2162-2	PH01A	Total/NA	Solid	8015B NM	22889
890-2162-3	PH01B	Total/NA	Solid	8015B NM	22889
890-2162-4	PH01C	Total/NA	Solid	8015B NM	22889
890-2162-5	PH01D	Total/NA	Solid	8015B NM	22889
890-2162-6	PH02	Total/NA	Solid	8015B NM	22889
890-2162-7	PH02A	Total/NA	Solid	8015B NM	22889
890-2162-8	PH02B	Total/NA	Solid	8015B NM	22889
890-2162-9	PH02C	Total/NA	Solid	8015B NM	22889
890-2162-10	PH02D	Total/NA	Solid	8015B NM	22889
890-2162-11	PH03	Total/NA	Solid	8015B NM	22889
890-2162-12	PH03A	Total/NA	Solid	8015B NM	22889
890-2162-13	PH03B	Total/NA	Solid	8015B NM	22889
890-2162-14	PH03C	Total/NA	Solid	8015B NM	22889
890-2162-15	PH03D	Total/NA	Solid	8015B NM	22889
890-2162-16	PH04	Total/NA	Solid	8015B NM	22889
890-2162-17	PH04A	Total/NA	Solid	8015B NM	22889
890-2162-18	PH04B	Total/NA	Solid	8015B NM	22889
890-2162-19	PH04C	Total/NA	Solid	8015B NM	22889
390-2162-20	PH04D	Total/NA	Solid	8015B NM	22889
MB 880-22889/1-A	Method Blank	Total/NA	Solid	8015B NM	22889

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery SDG: 03C1558002

### GC Semi VOA (Continued)

### **Analysis Batch: 22883 (Continued)**

L	ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
Ī	CS 880-22889/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	22889
L	CSD 880-22889/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	22889
8	90-2162-1 MS	PH01	Total/NA	Solid	8015B NM	22889
8	90-2162-1 MSD	PH01	Total/NA	Solid	8015B NM	22889

#### Prep Batch: 22889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2162-1	PH01	Total/NA	Solid	8015NM Prep	
890-2162-2	PH01A	Total/NA	Solid	8015NM Prep	
890-2162-3	PH01B	Total/NA	Solid	8015NM Prep	
890-2162-4	PH01C	Total/NA	Solid	8015NM Prep	
890-2162-5	PH01D	Total/NA	Solid	8015NM Prep	
890-2162-6	PH02	Total/NA	Solid	8015NM Prep	
890-2162-7	PH02A	Total/NA	Solid	8015NM Prep	
890-2162-8	PH02B	Total/NA	Solid	8015NM Prep	
890-2162-9	PH02C	Total/NA	Solid	8015NM Prep	
890-2162-10	PH02D	Total/NA	Solid	8015NM Prep	
890-2162-11	PH03	Total/NA	Solid	8015NM Prep	
890-2162-12	PH03A	Total/NA	Solid	8015NM Prep	
890-2162-13	PH03B	Total/NA	Solid	8015NM Prep	
890-2162-14	PH03C	Total/NA	Solid	8015NM Prep	
890-2162-15	PH03D	Total/NA	Solid	8015NM Prep	
890-2162-16	PH04	Total/NA	Solid	8015NM Prep	
890-2162-17	PH04A	Total/NA	Solid	8015NM Prep	
890-2162-18	PH04B	Total/NA	Solid	8015NM Prep	
890-2162-19	PH04C	Total/NA	Solid	8015NM Prep	
890-2162-20	PH04D	Total/NA	Solid	8015NM Prep	
MB 880-22889/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-22889/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-22889/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2162-1 MS	PH01	Total/NA	Solid	8015NM Prep	
890-2162-1 MSD	PH01	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 22996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-2162-1	PH01	Total/NA	Solid	8015 NM	
890-2162-2	PH01A	Total/NA	Solid	8015 NM	
890-2162-3	PH01B	Total/NA	Solid	8015 NM	
890-2162-4	PH01C	Total/NA	Solid	8015 NM	
890-2162-5	PH01D	Total/NA	Solid	8015 NM	
890-2162-6	PH02	Total/NA	Solid	8015 NM	
390-2162-7	PH02A	Total/NA	Solid	8015 NM	
890-2162-8	PH02B	Total/NA	Solid	8015 NM	
890-2162-9	PH02C	Total/NA	Solid	8015 NM	
890-2162-10	PH02D	Total/NA	Solid	8015 NM	
890-2162-11	PH03	Total/NA	Solid	8015 NM	
890-2162-12	PH03A	Total/NA	Solid	8015 NM	
890-2162-13	PH03B	Total/NA	Solid	8015 NM	
390-2162-14	PH03C	Total/NA	Solid	8015 NM	
390-2162-15	PH03D	Total/NA	Solid	8015 NM	
890-2162-16	PH04	Total/NA	Solid	8015 NM	

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery

SDG: 03C1558002

### GC Semi VOA (Continued)

### Analysis Batch: 22996 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-2162-17	PH04A	Total/NA	Solid	8015 NM
890-2162-18	PH04B	Total/NA	Solid	8015 NM
890-2162-19	PH04C	Total/NA	Solid	8015 NM
890-2162-20	PH04D	Total/NA	Solid	8015 NM

#### **HPLC/IC**

#### Leach Batch: 22962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-2162-1	PH01	Soluble	Solid	DI Leach	
890-2162-2	PH01A	Soluble	Solid	DI Leach	
890-2162-3	PH01B	Soluble	Solid	DI Leach	
890-2162-4	PH01C	Soluble	Solid	DI Leach	
890-2162-5	PH01D	Soluble	Solid	DI Leach	
890-2162-6	PH02	Soluble	Solid	DI Leach	
890-2162-7	PH02A	Soluble	Solid	DI Leach	
890-2162-8	PH02B	Soluble	Solid	DI Leach	
890-2162-9	PH02C	Soluble	Solid	DI Leach	
890-2162-10	PH02D	Soluble	Solid	DI Leach	
890-2162-11	PH03	Soluble	Solid	DI Leach	
MB 880-22962/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-22962/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-22962/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2162-2 MS	PH01A	Soluble	Solid	DI Leach	
890-2162-2 MSD	PH01A	Soluble	Solid	DI Leach	

#### Leach Batch: 22977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-2162-12	PH03A	Soluble	Solid	DI Leach	
890-2162-13	PH03B	Soluble	Solid	DI Leach	
890-2162-14	PH03C	Soluble	Solid	DI Leach	
890-2162-15	PH03D	Soluble	Solid	DI Leach	
890-2162-16	PH04	Soluble	Solid	DI Leach	
890-2162-17	PH04A	Soluble	Solid	DI Leach	
890-2162-18	PH04B	Soluble	Solid	DI Leach	
390-2162-19	PH04C	Soluble	Solid	DI Leach	
890-2162-20	PH04D	Soluble	Solid	DI Leach	
MB 880-22977/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-22977/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-22977/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2162-12 MS	PH03A	Soluble	Solid	DI Leach	
890-2162-12 MSD	PH03A	Soluble	Solid	DI Leach	

#### Analysis Batch: 23035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2162-1	PH01	Soluble	Solid	300.0	22962
890-2162-2	PH01A	Soluble	Solid	300.0	22962
890-2162-3	PH01B	Soluble	Solid	300.0	22962
890-2162-4	PH01C	Soluble	Solid	300.0	22962
890-2162-5	PH01D	Soluble	Solid	300.0	22962
890-2162-6	PH02	Soluble	Solid	300.0	22962

 Client: Ensolum
 Job ID: 890-2162-1

 Project/Site: PLU 158 Battery
 SDG: 03C1558002

## **HPLC/IC** (Continued)

#### **Analysis Batch: 23035 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2162-7	PH02A	Soluble	Solid	300.0	22962
890-2162-8	PH02B	Soluble	Solid	300.0	22962
890-2162-9	PH02C	Soluble	Solid	300.0	22962
890-2162-10	PH02D	Soluble	Solid	300.0	22962
890-2162-11	PH03	Soluble	Solid	300.0	22962
MB 880-22962/1-A	Method Blank	Soluble	Solid	300.0	22962
LCS 880-22962/2-A	Lab Control Sample	Soluble	Solid	300.0	22962
LCSD 880-22962/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	22962
890-2162-2 MS	PH01A	Soluble	Solid	300.0	22962
890-2162-2 MSD	PH01A	Soluble	Solid	300.0	22962

#### Analysis Batch: 23045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2162-12	PH03A	Soluble	Solid	300.0	22977
890-2162-13	PH03B	Soluble	Solid	300.0	22977
890-2162-14	PH03C	Soluble	Solid	300.0	22977
890-2162-15	PH03D	Soluble	Solid	300.0	22977
890-2162-16	PH04	Soluble	Solid	300.0	22977
890-2162-17	PH04A	Soluble	Solid	300.0	22977
890-2162-18	PH04B	Soluble	Solid	300.0	22977
890-2162-19	PH04C	Soluble	Solid	300.0	22977
890-2162-20	PH04D	Soluble	Solid	300.0	22977
MB 880-22977/1-A	Method Blank	Soluble	Solid	300.0	22977
LCS 880-22977/2-A	Lab Control Sample	Soluble	Solid	300.0	22977
LCSD 880-22977/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	22977
890-2162-12 MS	PH03A	Soluble	Solid	300.0	22977
890-2162-12 MSD	PH03A	Soluble	Solid	300.0	22977

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14

Job ID: 890-2162-1 Project/Site: PLU 158 Battery SDG: 03C1558002

**Client Sample ID: PH01** Lab Sample ID: 890-2162-1

Date Collected: 03/30/22 09:30 **Matrix: Solid** Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 13:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 11:48	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	22962	04/04/22 15:04	SC	XEN MID
Soluble	Analysis	300.0		1			23035	04/05/22 23:10	CH	XEN MID

**Client Sample ID: PH01A** Lab Sample ID: 890-2162-2 Date Collected: 03/30/22 09:50

Date Received: 04/01/22 09:40

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 22921 Total/NA Prep 5.02 g 5 mL 04/04/22 11:17 MR XEN MID Total/NA 8021B 5 mL 22890 04/04/22 13:24 XEN MID Analysis 1 5 mL MR Total/NA Total BTEX 23037 04/05/22 14:15 XEN MID Analysis 1 A.I Total/NA Analysis 8015 NM 22996 04/05/22 09:18 XEN MID Total/NA 22889 XEN MID Prep 8015NM Prep 10.03 g 04/04/22 08:58 DM 10 mL Total/NA Analysis 8015B NM 22883 04/04/22 12:53 AJ XEN MID Soluble SC XEN MID Leach DI Leach 5 g 50 mL 22962 04/04/22 15:04 Soluble Analysis 300.0 23035 04/05/22 23:19 CH XEN MID

Lab Sample ID: 890-2162-3 Client Sample ID: PH01B Date Collected: 03/30/22 10:00

Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 13:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 13:14	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	22962	04/04/22 15:04	SC	XEN MID
Soluble	Analysis	300.0		1			23035	04/05/22 23:45	CH	XEN MID

Lab Sample ID: 890-2162-4 **Client Sample ID: PH01C** 

Date Collected: 03/30/22 10:10 Date Received: 04/01/22 09:40

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 14:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID

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Page 33 of 46

Matrix: Solid

**Matrix: Solid** 

Matrix: Solid

Project/Site: PLU 158 Battery

Job ID: 890-2162-1 SDG: 03C1558002

**Client Sample ID: PH01C** 

Date Collected: 03/30/22 10:10 Date Received: 04/01/22 09:40 Lab Sample ID: 890-2162-4

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 13:35	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	22962	04/04/22 15:04	SC	XEN MID
Soluble	Analysis	300.0		1			23035	04/05/22 23:54	CH	XEN MID

**Client Sample ID: PH01D** Lab Sample ID: 890-2162-5

Date Collected: 03/30/22 10:15 Date Received: 04/01/22 09:40

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 14:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 13:57	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	22962	04/04/22 15:04	SC	XEN MID
Soluble	Analysis	300.0		1			23035	04/06/22 00:20	CH	XEN MID

**Client Sample ID: PH02** Lab Sample ID: 890-2162-6

Date Collected: 03/30/22 10:20 Date Received: 04/01/22 09:40

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 14:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 14:18	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	22962	04/04/22 15:04	SC	XEN MID
Soluble	Analysis	300.0		1			23035	04/06/22 00:29	CH	XEN MID

Lab Sample ID: 890-2162-7 **Client Sample ID: PH02A** 

Date Collected: 03/30/22 10:35 Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 15:06	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.01 g	10 mL	22889 22883	04/04/22 08:58 04/04/22 14:39	DM AJ	XEN MID XEN MID

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**Matrix: Solid** 

4/7/2022

Project/Site: PLU 158 Battery

Client Sample ID: PH02A

Date Collected: 03/30/22 10:35

Date Received: 04/01/22 09:40

SDG: 03C1558002

Lab Sample ID: 890-2162-7

Matrix: Solid

Job ID: 890-2162-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	22962	04/04/22 15:04	SC	XEN MID
Soluble	Analysis	300.0		1			23035	04/06/22 00:37	CH	XEN MID

**Client Sample ID: PH02B** Lab Sample ID: 890-2162-8

Date Collected: 03/30/22 10:40 **Matrix: Solid** 

Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 15:26	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 15:01	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	22962	04/04/22 15:04	SC	XEN MIC
Soluble	Analysis	300.0		1			23035	04/06/22 00:46	CH	XEN MID

**Client Sample ID: PH02C** Lab Sample ID: 890-2162-9

Date Collected: 03/30/22 10:45 **Matrix: Solid** Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 15:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 15:22	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	22962	04/04/22 15:04	SC	XEN MID
Soluble	Analysis	300.0		1			23035	04/06/22 00:55	CH	XEN MID

**Client Sample ID: PH02D** Lab Sample ID: 890-2162-10 **Matrix: Solid** 

Date Collected: 03/30/22 11:00 Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 16:07	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 15:44	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	22962	04/04/22 15:04	SC	XEN MID
Soluble	Analysis	300.0		1			23035	04/06/22 01:03	CH	XEN MID

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Released to Imaging: 5/18/2022 11:45:28 AM

Job ID: 890-2162-1 Project/Site: PLU 158 Battery SDG: 03C1558002

**Client Sample ID: PH03** Lab Sample ID: 890-2162-11

Date Collected: 03/30/22 11:10 Matrix: Solid Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 17:58	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 16:27	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	22962	04/04/22 15:04	SC	XEN MID
Soluble	Analysis	300.0		1			23035	04/06/22 22:51	CH	XEN MID

Client Sample ID: PH03A Lab Sample ID: 890-2162-12

Date Collected: 03/30/22 11:30 Matrix: Solid Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 18:18	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 16:48	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	22977	04/04/22 16:16	SC	XEN MID
Soluble	Analysis	300.0		1			23045	04/07/22 08:56	CH	XEN MID

**Client Sample ID: PH03B** Lab Sample ID: 890-2162-13 Date Collected: 03/30/22 11:40 **Matrix: Solid** 

Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 18:39	MR	XEN MIC
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 17:10	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	22977	04/04/22 16:16	SC	XEN MID
Soluble	Analysis	300.0		1			23045	04/07/22 09:23	CH	XEN MID

**Client Sample ID: PH03C** Lab Sample ID: 890-2162-14

Date Collected: 03/30/22 11:50 **Matrix: Solid** Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 18:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID

Project/Site: PLU 158 Battery

Job ID: 890-2162-1 SDG: 03C1558002

**Client Sample ID: PH03C** 

Date Received: 04/01/22 09:40

Date Collected: 03/30/22 11:50

Lab Sample ID: 890-2162-14

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 17:31	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	22977	04/04/22 16:16	SC	XEN MID
Soluble	Analysis	300.0		1			23045	04/07/22 09:31	CH	XEN MID

Lab Sample ID: 890-2162-15 **Client Sample ID: PH03D** 

Date Collected: 03/30/22 12:00 Date Received: 04/01/22 09:40

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 19:20	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 17:52	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	22977	04/04/22 16:16	SC	XEN MID
Soluble	Analysis	300.0		1			23045	04/07/22 09:40	CH	XEN MID

**Client Sample ID: PH04** Lab Sample ID: 890-2162-16

Date Collected: 03/30/22 12:10 Date Received: 04/01/22 09:40

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 19:40	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 18:14	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	22977	04/04/22 16:16	SC	XEN MID
Soluble	Analysis	300.0		1			23045	04/07/22 14:07	CH	XEN MID

Client Sample ID: PH04A Lab Sample ID: 890-2162-17

Date Collected: 03/30/22 12:30 Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 20:01	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 18:35	AJ	XEN MID

**Eurofins Carlsbad** 

Released to Imaging: 5/18/2022 11:45:28 AM

**Matrix: Solid** 

Job ID: 890-2162-1

SDG: 03C1558002

Client Sample ID: PH04A

Project/Site: PLU 158 Battery

Client: Ensolum

Date Collected: 03/30/22 12:30 Date Received: 04/01/22 09:40 Lab Sample ID: 890-2162-17

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	22977	04/04/22 16:16	SC	XEN MID
Soluble	Analysis	300.0		1			23045	04/07/22 10:07	CH	XEN MID

Client Sample ID: PH04B Lab Sample ID: 890-2162-18

Date Collected: 03/30/22 12:40 **Matrix: Solid** 

Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 20:21	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 18:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	22977	04/04/22 16:16	SC	XEN MID
Soluble	Analysis	300.0		1			23045	04/07/22 10:16	CH	XEN MID

Client Sample ID: PH04C Lab Sample ID: 890-2162-19

Date Collected: 03/30/22 12:50 Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 20:41	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 19:17	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	22977	04/04/22 16:16	SC	XEN MID
Soluble	Analysis	300.0		1			23045	04/07/22 10:24	CH	XEN MID

Client Sample ID: PH04D Lab Sample ID: 890-2162-20 Date Collected: 03/30/22 13:00 **Matrix: Solid** 

Date Received: 04/01/22 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	22921	04/04/22 11:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22890	04/04/22 21:02	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23037	04/05/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22996	04/05/22 09:18	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	22889	04/04/22 08:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22883	04/04/22 19:39	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	22977	04/04/22 16:16	SC	XEN MID
Soluble	Analysis	300.0		1			23045	04/07/22 10:33	CH	XEN MID

**Eurofins Carlsbad** 

Released to Imaging: 5/18/2022 11:45:28 AM

**Matrix: Solid** 

#### **Lab Chronicle**

Client: Ensolum

Project/Site: PLU 158 Battery

#### Laboratory References:

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

Job ID: 890-2162-1 SDG: 03C1558002

## **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-2162-1 Project/Site: PLU 158 Battery

SDG: 03C1558002

#### **Laboratory: Eurofins Midland**

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

Authority	Pi	rogram	Identification Number	Expiration Date
Texas	N	ELAP	T104704400-21-22	06-30-22
The following analytes the agency does not of	• •	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	

## **Method Summary**

Client: Ensolum

Project/Site: PLU 158 Battery

Job ID: 890-2162-1

SDG: 03C1558002

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

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

## **Sample Summary**

Client: Ensolum

Project/Site: PLU 158 Battery

Job ID: 890-2162-1

SDG: 03C1558002

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2162-1	PH01	Solid	03/30/22 09:30	04/01/22 09:40	1
890-2162-2	PH01A	Solid	03/30/22 09:50	04/01/22 09:40	3
890-2162-3	PH01B	Solid	03/30/22 10:00	04/01/22 09:40	4
890-2162-4	PH01C	Solid	03/30/22 10:10	04/01/22 09:40	5
890-2162-5	PH01D	Solid	03/30/22 10:15	04/01/22 09:40	6
890-2162-6	PH02	Solid	03/30/22 10:20	04/01/22 09:40	1
890-2162-7	PH02A	Solid	03/30/22 10:35	04/01/22 09:40	3
890-2162-8	PH02B	Solid	03/30/22 10:40	04/01/22 09:40	4
890-2162-9	PH02C	Solid	03/30/22 10:45	04/01/22 09:40	5
890-2162-10	PH02D	Solid	03/30/22 11:00	04/01/22 09:40	6
890-2162-11	PH03	Solid	03/30/22 11:10	04/01/22 09:40	1
890-2162-12	PH03A	Solid	03/30/22 11:30	04/01/22 09:40	3
890-2162-13	PH03B	Solid	03/30/22 11:40	04/01/22 09:40	4
890-2162-14	PH03C	Solid	03/30/22 11:50	04/01/22 09:40	5
890-2162-15	PH03D	Solid	03/30/22 12:00	04/01/22 09:40	6
890-2162-16	PH04	Solid	03/30/22 12:10	04/01/22 09:40	1
890-2162-17	PH04A	Solid	03/30/22 12:30	04/01/22 09:40	3
890-2162-18	PH04B	Solid	03/30/22 12:40	04/01/22 09:40	4
890-2162-19	PH04C	Solid	03/30/22 12:50	04/01/22 09:40	5
890-2162-20	PH04D	Solid	03/30/22 13:00	04/01/22 09:40	6

**Chain of Custody** 

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

Work Order No:

		6							5
		2	chho ons	1/4	4.1.22.8940	1. day 3.			3 BOBLE
(Signature) Date/Time	ture) Received by: (Signature)	Relinquished by: (Signature)	Date/Time		ature)	Received by: (Signature)	כ	y: (Şignature)	Relinguished by: (Signature)
r negotiated.	of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the citent if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	incurred by the cilent if such losses Xenco, but not analyzed. These terr	ny losses or expenses i submitted to Eurofins	ollity for a ch sample	sume any responsil charge of \$6 for eac	imples and shall not asi d to each project and a	nly for the cost of sa ;86.00 will be applied	co will be liable o nimum charge of	of service. Eurofins Xen
nditions	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	nco, its affiliates and subcontracto	ompany to Eurofins Xe	m client o	purchase order fro	ples constitutes a valid	Inquishment of sam	document and re	votice: Signature of this
: 1631 / 245.1 / 7470 / 74	9	O Cu Pb Mn N	Sb As Ba Be C	CRA ?	PLP 6010: 8F	TCLP / S	al(s) to be analyzed	and Metal(s) to	Circle Method(s) and Metal(s) to be analyzed
SIO, Na Sr TI Sn U V Zn	Ph Mg Mn Mo Ni K Se Ag	Cd Ca Cr Co Cii Fa Pi	Sh As Ra Ra R		SDCDA 13DDM Toyas 11 Al	21 VG)G8	/ BOSO:		Total 200 7 / 6
			*	<b>«</b>	6 V	0011	V	0 20+19	1
					S	1045		2 20HG	P
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CostCont-: 108/12/001			X	_	1 0	30/22 0430	5 3/	PHOI	9
Sample Comments			Ī	" # of Cont	Depth Comp	Date Time Sampled Sampled	Matrix San	ntification	Sample Identification
NaOH+Ascorbic Acid: SAPC	- - -	_	16,1 Pl		9.4	Corrected Temperature:	Corre		Total Containers:
Zn Acetate+NaOH: Zn	890-2162 Chain of Custody	890-2162 Ch	7		2.7	Jemperature Reading:	No N/A Jemi	Yes	Sample Custody Seals:
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>				P	10.2	Correction Factor:	No NIA Corre	Yes	Cooler Custody Seals:
NaHSO <sub>4</sub> : NABIS			les.	arar	FOOTING	Thermometer ID: (	No	ntact: (Yes)	Samples Received Intact:
H₃PO₄: HP				nete	Yes No	No Wet ice:	Temp Blank: Yes	IPT Tem	SAMPLE RECEIPT
H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na				ers	the lab, if received by 4:30pm	the lab, if re	1454 552		PO#:
HCL: HC HNO3: HN				Ī	TAT starts the day received by	TAT starts th		Ben Bertell	Sampler's Name:
<u> </u>					3 DAY	Due Date:	Comty, NW	Eddy Co.	Project Location:
None: NO DI Water: H <sub>2</sub> O				Code	Rush	☐ Routine	2008	200 8551 250	Project Number:
Preservative Codes	REQUEST	ANALYSIS RE			Turn Around	Turr	PU 158 B-1704	PU 158	Project Name:
ADaPT Other:	Deliverables: EDD		3	lum, co.	bbetill Beasdum, com	Email:	854-0850	(484) 80	Phone:
Reporting: Level II   Devel III   PST/UST   TRRP   Level IV	Reporting: Level II Level II	02288 W	Culsbed NM		City, State ZIP:		TX 75220	رداراء	City, State ZIP:
	State of Project:	Jan Street	3104 E.G.		Address:	Hwy Ste 1203	Northwest H	2351 W	Address:
Program: UST/PST [] PRP [] Brownfields [] RRC [] Superfund []	Program: UST/PST   PRP	4 Inc.	XTD Enrish	ē.	Company Name:		3	Ensolu	Company Name:
Work Order Comments	Work	1	Adrin Ocho	3	Bill to: (if different)		1,71	Rasin	Project Manager:
Page of		Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	575) 392-7550, Carlsb	bs, NM (	Hob				
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Page 44 of 46

NaOH+Ascorbic Acid. SAPC

Cost Cint - 108/12/001

Sample Comments

Zn Acetate+NaOH: Zn

H<sub>2</sub>S0<sub>4</sub>: H<sub>2</sub>

NaOH: Na HNO3: HN MeOH: Me

HCL HC Cool: Coo None: NO

DI Water: H<sub>2</sub>O

Preservative Codes

Other

Level IV

9,

H,PO, HP

Na2S2O3 NaSO NaHSO4 NABIS

Date/Time

08-25-2020 FUN

## **Login Sample Receipt Checklist**

 Client: Ensolum
 Job Number: 890-2162-1

 SDG Number: 03C1558002

List Source: Eurofins Carlsbad

Login Number: 2162 List Number: 1 Creator: Clifton, Cloe

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

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## **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2162-1 SDG Number: 03C1558002

Login Number: 2162 **List Source: Eurofins Midland** List Number: 2 List Creation: 04/04/22 07:46 AM

Creator: Teel, Brianna

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

<6mm (1/4").



APPENDIX E

**NMOCD Notifications** 

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

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 98975

#### **CONDITIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	98975
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
rhamlet	XTO's deferral requests to complete final remediation during any future major construction/alteration or final plugging/abandonment, whichever occurs first. Ensolum and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The area requested for deferral is identified on the site map as "BH01". The areas have been delineated and documented in the report. At this time, OCD approves this request. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue. This is a Federal site and will require like approval from BLM.	5/18/2022