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

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	NAPP2218642544
District RP	
Facility ID	
Application ID	

# **Release Notification**

### **Responsible Party**

				J.	
Responsible Party XTO Energy				OGRID 5380	
Contact Name Garrett Green		Contact T	elephone 575-200-0729		
Contact email garrett	.green@exxonmobil.c	com	Incident #	(assigned by OCD)	
	ress 3104 E. Greene St		w Mexico, 88220		
		Location	of Release S	ource	
32.18219			Longitude	-103.88002	
<u></u>		(NAD 83 in dec	cimal degrees to 5 deci	mal places)	
Site Name Pierce C	anyon 28 Battery		Site Type	Tank Battery	
Date Release Discove	<u> </u>		API# (if ap)		
	00/2//2022				
Unit Letter Section	on Township	Range	Cour	nty	
P 28	24S	30E	Edd	ly	
Surface Owner: State Federal Tribal Private (Name:)  Nature and Volume of Release					
M: Crude Oil	terial(s) Released (Select a Volume Release	od (bblg)	calculations or specific	visitification for the volumes provided below) Volume Recovered (bbls)	
		1(111)		1.5	
➤ Produced Water	Volume Release	. , 20.3	1 111 (TDC)	Volume Recovered (bbls) 28.5	
		tion of total dissolventer >10,000 mg		☐ Yes ☐ No	
Condensate	Volume Release			Volume Recovered (bbls)	
□ Natural Gas Volume Released (Mcf)			Volume Recovered (Mcf)		
Other (describe) Volume/Weight Released (provide units)		e units)	Volume/Weight Recovered (provide units)		
from 2.	n the 2" PSV. All flui	ds were recovered	. A 48-hour advan	ction, releasing fluids into non-permeable containment ace liner inspection notice was sent to NMOCD District designed. A third-party contractor has been retained for	

- 7	. 27		^		4 4	
· ·	CLEV	1000	100		4 SZ	
	uv	<b>6</b> 2.2	<b>2</b> e0	<i>18</i> (	E D	
	··· 🔿			J .	-7	

Incident ID	NAPP2218642544
District RP	
Facility ID	
Application ID	

Was this a major	If YES, for what reason(s) does the respon	sible party consider this a major release?
release as defined by	A release greater than 25 barrels.	
19.15.29.7(A) NMAC?		
🗶 Yes 🗌 No		
If YES, was immediate n	otice given to the OCD? By whom? To who	om? When and by what means (phone, email, etc)?
Yes, by Garrett Green to I	Mike Bratcher, Robert Hamlet, Jennifer Nob	ui, and ocd.enviro@state.nm.us on 06/28/2022 via email.
	Initial Re	sponse
The responsible		unless they could create a safety hazard that would result in injury
The responsible		
The source of the rele	ease has been stopped	
	is been secured to protect human health and t	he environment
	<u>-</u>	kes, absorbent pads, or other containment devices.
	ecoverable materials have been removed and	
•	d above have <u>not</u> been undertaken, explain w	
	u above have <u>not</u> been undertaken, explain w	ny.
NA		
		mediation immediately after discovery of a release. If remediation
		fforts have been successfully completed or if the release occurred ease attach all information needed for closure evaluation.
		est of my knowledge and understand that pursuant to OCD rules and
		est of my knowledge and understand that pursuant to OCD rules and leations and perform corrective actions for releases which may endanger
public health or the environ	ment. The acceptance of a C-141 report by the O	CD does not relieve the operator of liability should their operations have
		t to groundwater, surface water, human health or the environment. In esponsibility for compliance with any other federal, state, or local laws
and/or regulations.	THE THIRDON HOUSE NOT TO THE OPENING OF I	soponosome, for compilated with any other recent, state, or recent tame
Printed Name: Garrett G	reen	Title: SSHE Coordinator
T.	A R	*
Signature:	The Siller	Date:
email: garrett.green@exx	konmobil.com	Telephone: 575-200-0729
		-
OCD Only		
Received by:Jocelyn	Harimon	Date: 07/05/2022

Location:	Pierce Canyon 28 Battery		
Spill Date:	6/27/2022		
	Area 1		
Approximate A	rea =	168.44	cu.ft.
	VOLUME OF LEAK		
Total Crude Oil	=	1.50	bbls
Total Produced Water = 28.50 bl			bbls
TOTAL VOLUME OF LEAK			
<b>Total Crude Oi</b>	=	1.50	bbls
Total Produced Water = 28.50		bbls	
TOTAL VOLUME RECOVERED			
<b>Total Crude Oi</b>	=	1.50	bbls
Total Produced	l Water =	28.50	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 122679

### **CONDITIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	122679
	Action Type:
	[C-141] Release Corrective Action (C-141)

### CONDITIONS

Created By		Condition Date
jharimon	None	7/5/2022

	Page 5 of 13	33
Incident ID	NAPP2218642544	
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?				
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No ☐ Yes ☑ No			
Are the lateral extents of the release within 300 feet of a wetland?				
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			
2.6 the colored map are more and colored map of the colored of the	☐ Yes 🔀 No			
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.				
Characterization Report Checklist: Each of the following items must be included in the report.				
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li> <li>Field data</li> <li>Data table of soil contaminant concentration data</li> <li>Depth to water determination</li> <li>Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li> </ul>				
Boring or excavation logs				

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.

Topographic/Aerial maps

Photographs including date and GIS information

Laboratory data including chain of custody

Received by OCD: 9/23/2022 10:44:55 AM
Form C-141 State of New Mexico
Page 4 Oil Conservation Division

	Page 6 of 1.	33
Incident ID	NAPP2218642544	
District RP		
Facility ID		
Application ID		

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.			
Printed Name:Garrett Green	Title: SSHE Coordinator		
Signature: Sath Sur	Date:9/23/2022		
email:garrett.green@exxonmobil.com	Telephone: 575-200-0729_		
OCD Only			
Received by:Jocelyn Harimon	Date: 09/23/2022		

Page 7 of 133

Incident ID NAPP2218642544
District RP
Facility ID
Application ID

# Closure

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

Closure Report Attachment Checklist: Each of the following	g items must be included in the closure report.
	9.11 NMAC
Photographs of the remediated site prior to backfill or photomust be notified 2 days prior to liner inspection)	os of the liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate OI	DC District office must be notified 2 days prior to final sampling)
□ Description of remediation activities	
and regulations all operators are required to report and/or file certamay endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rehuman health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regulations.	·
OCD Only	
Received by: <u>Jocelyn Harimon</u>	Date:09/23/2022
	ty of liability should their operations have failed to adequately investigate and se water, human health, or the environment nor does not relieve the responsible d/or regulations.
	12/14/2022
Closure Approved by:  Jocelyn Harimo	Date: Environmental Specialist
Printed Name:	Title:



September 23, 2022

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

Re: Closure Request

Pierce Canyon 28 Battery Incident Number NAPP2218642544 Eddy County, New Mexico

### To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this Closure Request to document site assessment and soil sampling activities performed at the Pierce Canyon 28 Battery (Site). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a release of produced water within lined containment at the Site. Based on field observations, field screening activities, and laboratory analytical results, XTO is submitting this Closure Request and requesting closure for Incident Number NAPP2218642544.

### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit P, Section 28, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.18219° N, 103.88002° W) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On June 27, 2022, a fresh water knock out (FWKO) tank over pressured due to mechanical water dump malfunction, releasing 1.5 barrels (bbls) of crude oil and 28.5 bbls of produced water from the Pressure Safety Valve (PSV) into the lined containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; all 30 bbls of released fluids 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). A liner integrity inspection was conducted by XTO personnel following the fluid recovery and upon inspection, the liner was determined to be insufficient. XTO reported the release to the NMOCD via email on June 28, 2022 and submitted a Release Notification Form C-141 (Form C-141) on July 5, 2022. The release was assigned Incident Number NAPP2218642544.

### SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization.

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 601 N Marienfield Street #400 | Midland, TX 78209 | ensolum.com



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 September 10, 2020, soil boring BH-01, with New Mexico Office of the State Engineer (NMOSE) permit number file number C-4474, was drilled 0.17 miles southeast of the Site utilizing a track-mounted hollow-stem auger rig and rotary dill. Soil boring BH-01 was drilled to a depth of 110 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling 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 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. All wells used to determine depth to groundwater are depicted on Figure 1. The Well Record and Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a seasonal dry wash, located approximately 752 feet northeast of the Site. A potential seasonal dry wash located approximately 141 feet northeast of the Site has been determined to be non-significant due to a recent approved watercourse survey completed on July 27, 2020. The watercourse survey conducted can be found in the approved Closure Request for the Poker Lake Unit Pierce Canyon 28 site on pages 22 through 24 and includes Incident numbers NRM1931858285 (2RP-5697) and NCE2002742193. The Closure Request was received by the NMOCD on December 23, 2020 and approved on March 10, 2021.

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). Potential 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 August 16, 2022, Site assessment activities were conducted to evaluate the potential release extent based on information provided on the Form C-141. Ensolum personnel advanced one borehole (BH01) via hand-auger at the location of the tear in the liner identified during the liner integrity inspection. Three discrete delineation soil samples (BH01/BH01A/BH01B) were collected from the borehole at depths of approximately 0.5 feet, 1-foot, and 2 feet bgs, respectively. Four additional lateral delineation boreholes (BH02/BH02A through BH05/BH05A) were collected around the lined containment via hand auger at depths of 0.5 feet and 1-foot bgs, respectively, to confirm the a release did not extend outside the lined containment. The release extent/containment and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Soil from the delineation boreholes were 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 all boreholes were documented on lithologic/soil sampling logs, which are



included as Appendix B. The boreholes were backfilled with soil removed and an XTO contractor repaired the tear in the liner. Photographic documentation was conducted during the Site visit. A photographic log is included in Appendix C.

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

### LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples from all boreholes indicated all COC concentrations were compliant with the Site Closure Criteria. Additionally, laboratory analytical results for all COCs in delineation soil samples BH01A at 1-foot bgs, BH01B at 2 feet bgs, and lateral delineation boreholes BH02/BH02A through BH05/BH05A were compliant with the most stringent Table 1 Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical report is included as Appendix D.

### **CLOSURE REQUEST**

Following the failed liner integrity inspection at the Site, Ensolum personnel advanced one borehole (BH01) at the location of the tear in the liner to assess for the presence or absence of impacted soil resulting from the June 27, 2022, crude oil and produced water release within lined containment. Laboratory analytical results for all delineation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria. Additionally, laboratory analytical results for delineation soil samples BH01A at 1-foot bgs, BH01B at 2 feet bgs, and lateral delineation boreholes BH02/BH02A through BH05/BH05A were compliant with the most stringent Table 1 Closure Criteria. The release was contained laterally by the lined containment and all released fluids were recovered during initial response activities. The tear in the liner was subsequently repaired. NMOCD notifications are included in Appendix E.

Based on initial response efforts, depth to groundwater greater than 100 feet bgs, and soil sample laboratory analytical results compliant with the Closure Criteria directly beneath the tear in the liner, XTO respectfully requests closure for Incident Number NAPP2218642544.



If you have any questions or comments, please contact Ms. Ashley Ager at (970) 946-1093 or aager@ensolum.com.

ashley L. ager

Program Director

Ashley L. Ager, M.S., PG

Sincerely, **Ensolum, LLC** 

Benjamin J. Belill Project Geologist

Garrett Green, XTO

**Bureau of Land Management** 

Shelby Pennington, XTO

### Appendices:

CC:

Figure 1 Site Receptor Map

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

Appendix A Well Record and Log

Appendix B Lithologic Soil Sampling Logs

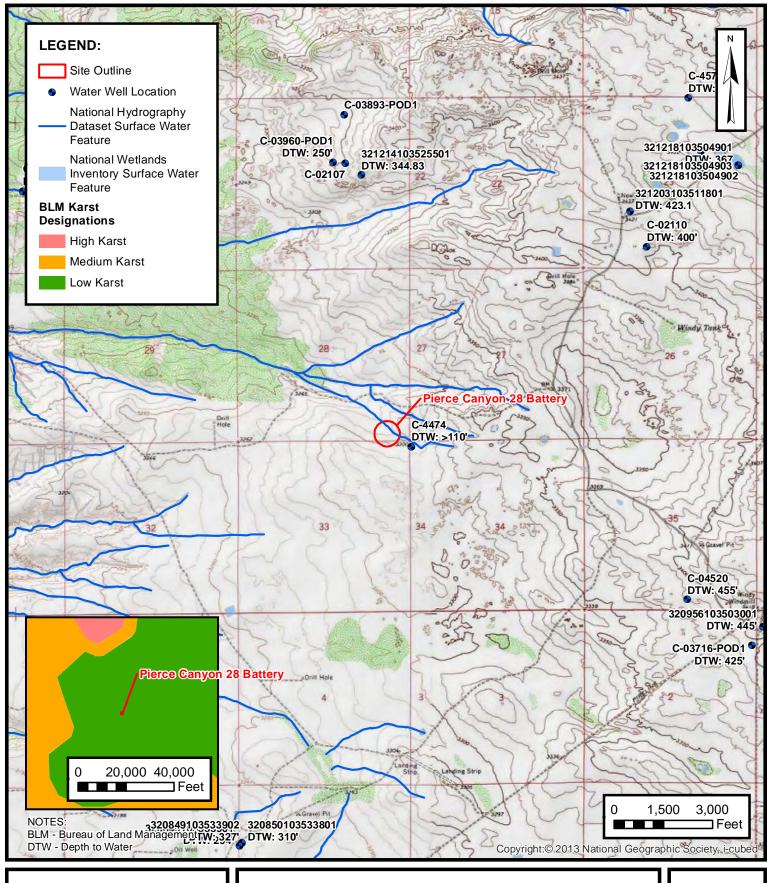
Appendix C Photographic Log

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

Appendix E NMOCD Sample Notification



**FIGURES** 



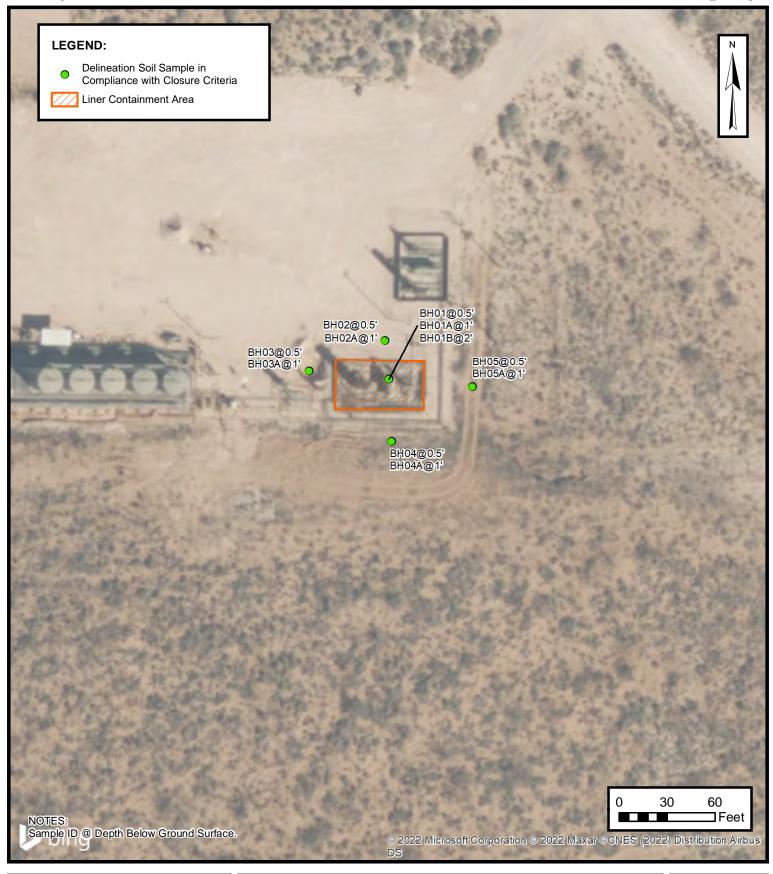


### SITE RECEPTOR MAP

XTO ENERGY, INC
PIERCE CANYON 28 BATTERY
NAPP2218642544

Unit P, Sec 28, T24S, R30E Eddy County, New Mexico **FIGURE** 

1





### **DELINEATION SOIL SAMPLE LOCATIONS**

XTO ENERGY, INC
PIERCE CANYON 28 BATTERY
NAPP2218642544
Unit P, Sec 28, T24S, R30E
Eddy County, New Mexico

**FIGURE** 

2



**TABLES** 



# TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Pierce Canyon 28 Battery XTO Energy, Inc. Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)		
NMOCD Table 1 C	losure Criteria (	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000		
	Delineation Soil Samples											
BH01	08/16/2022	0.5	<0.00200	<0.00401	<49.9	180	<49.9	180	180	1,310		
BH01A	08/16/2022	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	91.5		
BH01B	08/16/2022	2	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	81.1		
BH02	08/16/2022	0.5	<0.00198	0.00609	<50.0	61.4	<50.0	61.4	61.4	156		
BH02A	08/16/2022	1	<0.00201	<0.00402	<50.0	55.0	<50.0	55.0	55.0	179		
BH03	08/16/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	24.3		
BH03A	08/16/2022	1	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	80.9		
BH04	08/16/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	11.0		
BH04A	08/16/2022	1	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	10.5		
BH05	08/16/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	10.8		
BH05A	08/16/2022	1	< 0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	12.0		

#### Notes:

bgs: below ground surface mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Ensolum 1 of 1



**APPENDIX A** 

Well Record and Log

38E 07 00T 8 2020 #43/34



ON	OSE POD NO. POD1 (BI		0.)		WELL TAG ID NO. n/a			OSE FILE NO( C-4474	S).			
GENERAL AND WELL LOCATION	WELL OWNE	•	,					PHONE (OPTI	ONAL)			
בנ	WELL OWNE	R MAILIN	G ADDRESS					CITY		STATE		ZIP
WEL	6401 Holid	ay Hill I	От.					Midland TX 79707				
Ę	WELL		D	EGREES MINUTES SECONDS								
Ę	LOCATIO	N L	ATTTUDE	32°	10'	51.	44" N	* ACCURACY	REQUIRED: ONE TENT	TH OF A S	ECOND	
ER	(FROM GP	s) [10	ONGITUDE	-103°	52'	38.	65" W	* DATUM RE	QUIRED: WGS 84			
EN	DESCRIPTIO		NG WELL LOCATION TO	O STREET ADD	RESS AND COMMON	LANDM	ARKS - PLS	S (SECTION, TO	WNSHJIP, RANGE) WH	ERE AVA	LABLE	
<del>-</del>												
	LICENSE NO		NAME OF LICENSEI						NAME OF WELL DR			
	124	9			Jackie D. Atkins				Atkins Eng	ineering	Associates, I	nc.
	DRILLING ST	TARTED	DRILLING ENDED		OMPLETED WELL (F		BORE HO	LE DEPTH (FT)	DEPTH WATER FIRS	T ENCOU	INTERED (FT)	
	09/10	/20	09/10/20	tempo	rary well materia	al		110		n/a		
									STATIC WATER LEV	EL IN CO	MPLETED WE	LL (FT)
Z	COMPLETED	WELL IS:	ARTESIAN	J DRY HO	LE   SHALLO	W (UNCC	ONFINED)			n/a		
OLL	DRILLING FI	LUID:	<b>☑</b> AIR	MUD MUD	ADDITIV	ES – SPE	CIFY:					
2. DRILLING & CASING INFORMATION	DRILLING M	ETHOD:	▼ ROTARY	П намме	R CABLE T	OOL	ОТНЕ	R – SPECIFY: Hollow Stem Auger				
NFO.	DEPTH	(feet bgl)	BORE HOLE	CASING	MATERIAL AND	O/OR			CASING	CAST	NG WALL	ar om
G D	FROM	то	DIAM		GRADE			ASING NECTION	INSIDE DIAM.		CKNESS	SLOT SIZE
SIN			(inches)		each casing string, sections of screen)		7	TYPE	(inches)	(i	nches)	(inches)
ა ა	0	48	±8.5	1 1000	Boring- HSA		(add coup	ling diameter)				<del> </del>
8	48	110	±4.5	Be	Boring- Air Rotary				-			-
Ž					,					<u> </u>		
E				<del> </del>								
Z. D.			+									
``				1								
			+	-						<del></del>		
				<del> </del>								<del> </del>
												<del>                                     </del>
				<del> </del>								<b>-</b>
				<del>                                     </del>					<u> </u>			
د	DEPTH (		BORE HOLE DIAM. (inches)		IST ANNULAR SE				AMOUNT		METHO PLACEN	
₹	FROM	то	DIAM. (inches)	GRA	VEL PACK SIZE	-KANGI	BYINII	EKVAL	(cubic feet)		PLACEN	TEN I
¥.			******									
AR												
<u>[</u>												
ANNULAR MATERIAL												
3.7												
FOR	OSE INTER	NAL USE						WR-2	0 WELL RECORD	k LOG (	Version 06/3	0/17)
	NO.	-(	1474		POD NO		T	TRN		410	7	
LOC	ATION		24	15.30	E. 34.	///		WELL TAG II	D NO.		PAGE	1 OF 2

PAGE 2 OF 2

	DEPTH (	feet bgl) TO	THICKNESS (feet)	INCLUDE WATER	O TYPE OF MATERI R-BEARING CAVITI plemental sheets to fu	ES OR FRAC	TURE ZONE	s	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	0	30	30	Sand, Medium . 1	poorly-graded with sil	t, no plasticity	, Red-Brown		Y /N	
	30	45	15		d, Medium, low plasti		Y √N			
	45	50	5		poorly-graded, compa		Y √N			
	50	58	8		cemented with mediu		y √n			
	58	73	15		dium, Moderate plastic		y √n			
د.	73	78	5	Caliche, with Sandy cl		hite	Y ✓N			
YEL	78	83	5		m , poorly-graded, no				Y √N	
4. HYDROGEOLOGIC LOG OF WELL	83	88	5		ım, Moderate plasticity			/n	y √n	
ğ	88	110	22		ne , poorly-graded, no				Y ✓N	
CC					, poor, g,	P			Y N	
Ö						**			Y N	
EOL									Y N	
õ									Y N	
Ž.									Y N	
4 H									Y N	
					18/4-				Y N	
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	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARING	STRATA:			TOT	AL ESTIMATED	
	Прим	. Па	IR LIFT	BAILER TOTA	HER - SPECIFY:			WEI	LL YIELD (gpm):	0.00
			K ZH' I	JBAILER LJOII	ink-bilen i.					
NOIS	WELL TES			ACH A COPY OF DATA ME, AND A TABLE SH						
TEST; RIG SUPERVIS										
EST	PRINT NAM	(E(S) OF DI	RILL RIG SUPER	RVISOR(S) THAT PROV	/IDED ONSITE SUPI	ERVISION O	F WELL CON	STRU	CTION OTHER TH	AN LICENSEE:
5. T	Shane Eldri	(-)								
6. SIGNATURE	CORRECT I	RECORD OF	F THE ABOVE D	FIES THAT, TO THE BE DESCRIBED HOLE AND 30 DAYS AFTER COMP	THAT HE OR SHE	WILL FILE				
SIGN	Jack A	tkins		Jac	kie D. Atkins				10/07/2020	
<b>.</b>		SIGNAT	URE OF DRILLE	ER / PRINT SIGNEE N	IAME				DATE	
FOI	R OSE INTER	NAL USE					WR-20 WEI	LL RE	CORD & LOG (Ver	rsion 06/30/2017)
	E NO.	-49	174	I	POD NO.	7	TRN NO.	V	77 410	

LOCATION



**APPENDIX B** 

Lithologic Soil Sampling Logs

								Sample Name: BH01	Date:08/16/2022		
	7		N I					Site Name: Pierce Canyon 28 B			
L			V	3	U	U	V	Incident Number: NAPP221864			
								Job Number: 03E1588094			
		LITHOL	OGI	C / SOIL S	SAMPLING	LOG		Logged By:CW	Method: Hand auger		
Coord	inates: 32	2.18219N	, -103	3.88002W				Hole Diameter: 3.5	Total Depth: 2'		
H			_					PID for chloride and vapor, respectable Limits	pectively. Chloride test		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol		Descriptions		
M M	1,472	11.5	Y N	BH01	0.5 _ -	0 - -	CCHE (fill)	0-1', CALICHE, moist, ligh unconsolidated, light l odor, fill. @0.5'-1', no odor, no sta			
М	ND	0.2	N	BH01A	1 -	1	SM	1'-2', SILTY SAND, moist, grain, poorly graded, s	reddish brown, very fine silty, no stain, no odor.		
M	ND	0	Z	вно1в	2 -	2 - - - - -	TD	Total Depth at 2 feet bgs			

						Cample Names BUO2	Data:09/16/2022
						Sample Name: BH02	Date:08/16/2022
	EI	N S	OI	_ U	M	Site Name: Pierce Canyon 28 Batte	
						Incident Number: NAPP221864254	4
<u> </u>	LITUOLO	OCIC / CO!!	CARADITA	100		Job Number: 03E1588094	ha il ilii
		OGIC / SOIL	SAMPLING	LOG		Logged By:CW	Method: Hand auger
Coordinates: 32						Hole Diameter: 3.5	Total Depth: 1'
performed with		-				PID for chloride and vapor, respecti ctable Limits	very. Chioride test
Moisture Content Chloride (ppm)	Vapor (ppm)	Staining Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	·
M ND	0.0	N BH02	0.5 <u>-</u>	0	CCHE (fill)	0-1', CALICHE, moist, light br unconsolidated, no stain,	own/tan, very sandy, no odor.
M ND	0.0	N BH02A	1 -	_ 1	TD	Total depth at 1-foot bgs.	

							Cample Name: DUO2	Data:09/16/2022		
1	7						Sample Name: BH03 Site Name: Pierce Canyon 28 Bat	Date:08/16/2022		
		E	N	5	OLU	M	Incident Number: NAPP2218642			
1										
		LITHOL	OGI	C / SOIL S	SAMPLING LOG		Job Number: 03E1588094			
Coord				3.88002W	SAIVIPLING LOG		Logged By:CW Hole Diameter: 3.5	Method: Hand auger Total Depth: 1'		
					ith HACH Chloride Tee	t Strins and	PID for chloride and vapor, respe	· ·		
			_		l to distilled water. NE			ctively. Chloride test		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	USCS/ Sym	Lithologic De	·		
М	ND	0.0	N	BH03	0.5	CCHE (fill)	0-1', CALICHE, moist, light unconsolidated, no stair	brown/tan, very sandy, n, no odor.		
М	ND	0.0	N	вноза	1 1 1					
		2.0				TD	Total depth at 1-foot bgs.			
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								Carrada Narra e BUO4	D-+00/45/2022		
7								Sample Name: BH04	Date:08/16/2022		
		E	N	S	OL	U	M	Site Name: Pierce Canyon 28			
			_								
<u> </u>		IITUOI	UCI4	C / SOIL 6	SAMPLING	106		Job Number: 03E1588094			
Coord				3.88002W	AIVIPLING	LUG		Logged By:CW Hole Diameter: 3.5	Method: Hand auger Total Depth: 1'		
					ith HACH Ch	lorida Tast 9	String and	PID for chloride and vapor, re	·		
			_					ctable Limits	espectively. emoriae test		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol		c Descriptions st, reddish brown, very fine		
М	ND	0.0	N	BH04	0.5	-	5	grain, poorly graded	l, silty, no stain, no odor.		
М	ND	0.0	N	вно4А	1 -	1	TD	Total depth at 1-foot b	gs.		

								Cample Names DUCE	Data:09/16/2022		
1	7							Sample Name: BH05 Site Name: Pierce Canyon 28 Batte	Date:08/16/2022		
			N	S	OL	U	M	Incident Number: NAPP221864254			
			_			_		Job Number: 03E1588094			
<b> </b>		יחדוו	UCI4	r / sou s	SAMPLING	106					
Coord				3.88002W	AIVIPLING	LUG		Logged By:CW Hole Diameter: 3.5	Method: Hand auger Total Depth: 1'		
					ith HACH Ch	lorido Tost 9		PID for chloride and vapor, respecti	·		
			_				•	ctable Limits	very. Cilionae test		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	·		
М	ND	0.0	Ν	BH05	0.5	0	SM	0-1', SILTY SAND, moist, red grain, poorly graded, silty	dish brown, very fine r, no stain, no odor.		
M	ND	0.0	N	BH05A	1	1					
'*'	שויו	0.0	1.4	DITOSA	· -	- ± -	TD	Total depth at 1-foot bgs.			
					-	-					
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**APPENDIX C** 

Photographic Log



Photographic Log
XTO Energy, Inc.

Site Name Pierce Canyon 28 Battery Incident Number NAPP2218642544





Photograph 1 Date: August 16, 2022 Description: Site Assessment/Delineation Activities

Photograph 2 Date:August 16, 2022 Description: Site Assessment/Delineation Activities



Photograph 3 Date:August 16, 2022 Description: Site Assessment/Delineation Activities

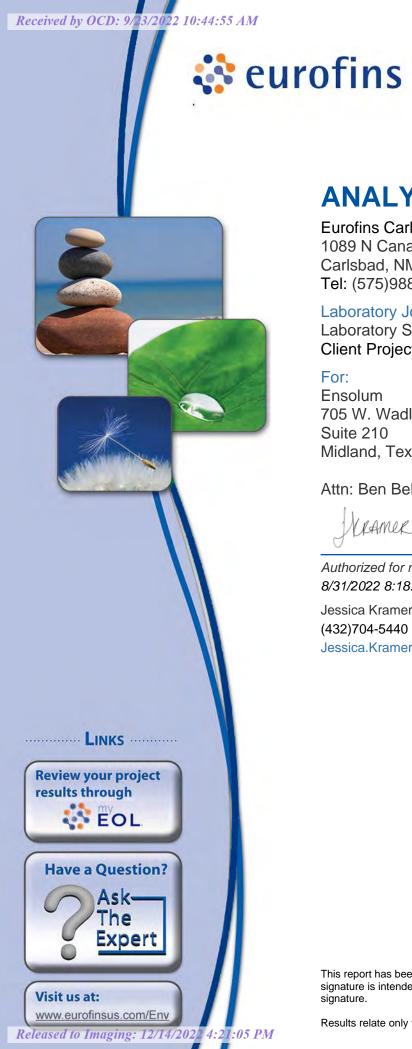


Photograph 4 Date:August 16, 2022 Description: Patched Liner



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: 890-2770-1

Laboratory Sample Delivery Group: 03E1558094 Client Project/Site: Pierce Canyon 28 Battery

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/31/2022 8:18:13 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: Pierce Canyon 28 Battery

Laboratory Job ID: 890-2770-1 SDG: 03E1558094

# **Table of Contents**

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QC Sample Results	8
QC Association Summary	12
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Certification Summary	15
Method Summary	16
Sample Summary	17
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# **Definitions/Glossary**

Client: Ensolum Job ID: 890-2770-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

### **Qualifiers**

**GC VOA** Qualifier

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

Indicates the analyte was analyzed for but not detected. U

### GC Semi VOA

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

### **HPLC/IC**

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

# Glossary

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

**Eurofins Carlsbad** 

### **Case Narrative**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2770-1 SDG: 03E1558094

Job ID: 890-2770-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2770-1

#### Receipt

The samples were received on 8/17/2022 4:13 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 5.2°C

### **GC VOA**

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-32856 and analytical batch 880-33137 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.

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

### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (890-2762-A-21-B), (890-2762-A-21-C MS) and (890-2762-A-21-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: BH02 (890-2770-1) and BH02A (890-2770-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: The method blank for preparation batch 880-32517 and analytical batch 880-32464 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD\_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-32517 and analytical batch 880-32464 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-32517 and analytical batch 880-32464 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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

#### HPLC/IC

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

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Matrix: Solid

Lab Sample ID: 890-2770-1

# **Client Sample Results**

Client: Ensolum Job ID: 890-2770-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

**Client Sample ID: BH02** 

Date Collected: 08/16/22 10:05 Date Received: 08/17/22 16:13

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		08/24/22 15:02	08/29/22 01:22	
Toluene	<0.00198	U	0.00198	mg/Kg		08/24/22 15:02	08/29/22 01:22	
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		08/24/22 15:02	08/29/22 01:22	•
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		08/24/22 15:02	08/29/22 01:22	
o-Xylene	0.00609		0.00198	mg/Kg		08/24/22 15:02	08/29/22 01:22	
Xylenes, Total	0.00609		0.00396	mg/Kg		08/24/22 15:02	08/29/22 01:22	•
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	125		70 - 130			08/24/22 15:02	08/29/22 01:22	-
1,4-Difluorobenzene (Surr)	102		70 - 130			08/24/22 15:02	08/29/22 01:22	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00609		0.00396	mg/Kg			08/29/22 14:49	
Analyte Total TPH	61.4	Qualifier	<b>RL</b> 50.0	mg/Kg	D	Prepared	Analyzed 08/22/22 13:19	Dil Fa
Total TPH	61.4		50.0	mg/Kg			08/22/22 13:19	1
Method: 8015B NM - Diesel Rang	•							
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0	mg/Kg		08/19/22 13:54	08/19/22 23:04	•
Diesel Range Organics (Over C10-C28)	61.4		50.0	mg/Kg		08/19/22 13:54	08/19/22 23:04	
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/19/22 23:04	•
	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
Surrogate	/orecovery							
Surrogate 1-Chlorooctane		S1-	70 - 130			08/19/22 13:54	08/19/22 23:04	
	50	S1- S1-	70 - 130 70 - 130			08/19/22 13:54 08/19/22 13:54	08/19/22 23:04 08/19/22 23:04	
1-Chlorooctane	50 47	S1-						
1-Chlorooctane o-Terphenyl	50 47 omatography -	S1-		Unit	<u>D</u>			Dil Fac

Client Sample ID: BH02A

Date Collected: 08/16/22 10:10

Released to Imaging: 12/14/2022 4:21:05 PM

Date Received: 08/17/22 16:13

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/24/22 15:02	08/29/22 01:42	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/24/22 15:02	08/29/22 01:42	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/24/22 15:02	08/29/22 01:42	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/24/22 15:02	08/29/22 01:42	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/24/22 15:02	08/29/22 01:42	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/24/22 15:02	08/29/22 01:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			08/24/22 15:02	08/29/22 01:42	1

**Eurofins Carlsbad** 

Matrix: Solid

Lab Sample ID: 890-2770-2

Matrix: Solid

Lab Sample ID: 890-2770-2

# **Client Sample Results**

Client: Ensolum
Project/Site: Pierce Canyon 28 Battery
SDG: 03E1558094

Client Sample ID: BH02A

Date Collected: 08/16/22 10:10 Date Received: 08/17/22 16:13

Sample Depth: 1

Analyte

Chloride

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	100		70 - 130			08/24/22 15:02	08/29/22 01:42	
Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/29/22 14:49	
Method: 8015 NM - Diesel Range	e Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	55.0		50.0	mg/Kg			08/22/22 13:19	
Method: 8015B NM - Diesel Rand	ge Organics (D	RO) (GC)						
	• •	RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Analyte	• •	Qualifier	RL	<mark>Unit</mark> mg/Kg	<u>D</u>	Prepared 08/19/22 13:54	Analyzed 08/19/22 23:26	Dil Fa
Analyte Gasoline Range Organics	Result	Qualifier			<u>D</u>			Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier			<u>D</u>			Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0 55.0	Qualifier U *1	50.0	mg/Kg	<u>D</u>	08/19/22 13:54 08/19/22 13:54	08/19/22 23:26 08/19/22 23:26	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result   <50.0	Qualifier U *1	50.0	mg/Kg	<u> </u>	08/19/22 13:54	08/19/22 23:26	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.0 55.0	Qualifier U *1	50.0	mg/Kg	<u> </u>	08/19/22 13:54 08/19/22 13:54	08/19/22 23:26 08/19/22 23:26	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result  <50.0 55.0 <50.0	Qualifier U *1	50.0 50.0 50.0	mg/Kg	<u>D</u>	08/19/22 13:54 08/19/22 13:54 08/19/22 13:54	08/19/22 23:26 08/19/22 23:26 08/19/22 23:26	

4.98

Unit

mg/Kg

Prepared

Analyzed

08/31/22 16:32

Result Qualifier

179

**Eurofins Carlsbad** 

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Dil Fac

# **Surrogate Summary**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2761-A-1-E MS	Matrix Spike	103	104	
890-2761-A-1-F MSD	Matrix Spike Duplicate	119	105	
890-2770-1	BH02	125	102	
890-2770-2	BH02A	101	100	
LCS 880-32856/1-A	Lab Control Sample	126	100	
LCSD 880-32856/2-A	Lab Control Sample Dup	125	99	
MB 880-32856/5-A	Method Blank	95	95	

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

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

Matrix: Solid Prep Type: Total/NA

=			
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2762-A-21-C MS	Matrix Spike	64 S1-	56 S1-
890-2762-A-21-D MSD	Matrix Spike Duplicate	70	60 S1-
890-2770-1	BH02	50 S1-	47 S1-
890-2770-2	BH02A	60 S1-	56 S1-
LCS 880-32517/2-A	Lab Control Sample	111	107
LCSD 880-32517/3-A	Lab Control Sample Dup	108	101
MB 880-32517/1-A	Method Blank	78	79

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Ensolum Job ID: 890-2770-1 SDG: 03E1558094 Project/Site: Pierce Canyon 28 Battery

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-32856/5-A

**Matrix: Solid** Analysis Batch: 33137 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 32856

1

	МВ	мв						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:02	08/28/22 18:09	
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:02	08/28/22 18:09	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:02	08/28/22 18:09	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/24/22 15:02	08/28/22 18:09	
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:02	08/28/22 18:09	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/24/22 15:02	08/28/22 18:09	

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	08/24/22 15:02	08/28/22 18:09	1
1.4-Difluorobenzene (Surr)	95		70 - 130	08/24/22 15:02	08/28/22 18:09	1

Lab Sample ID: LCS 880-32856/1-A

**Matrix: Solid** 

**Analysis Batch: 33137** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 32856

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.08736 mg/Kg 87 70 - 130 Toluene 0.100 0.08468 mg/Kg 85 70 - 130 0.100 0.08827 Ethylbenzene mg/Kg 88 70 - 130 0.200 93 70 - 130 m-Xylene & p-Xylene 0.1858 mg/Kg 0.100 0.1087 70 - 130 o-Xylene mg/Kg 109

LCS LCS

Surrogate	%Recovery Quali	fier Limits
4-Bromofluorobenzene (Surr)	126	70 - 130
1,4-Difluorobenzene (Surr)	100	70 - 130

Lab Sample ID: LCSD 880-32856/2-A

**Matrix: Solid** 

**Analysis Batch: 33137** 

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

Prep Type: Total/NA

Prep Batch: 32856

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08754		mg/Kg		88	70 - 130	0	35	
Toluene	0.100	0.08768		mg/Kg		88	70 - 130	3	35	
Ethylbenzene	0.100	0.09233		mg/Kg		92	70 - 130	4	35	
m-Xylene & p-Xylene	0.200	0.1992		mg/Kg		100	70 - 130	7	35	
o-Xylene	0.100	0.1153		mg/Kg		115	70 - 130	6	35	

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	125	70 - 130
1,4-Difluorobenzene (Surr)	99	70 - 130

Lab Sample ID: 890-2761-A-1-E MS

**Matrix: Solid** 

**Analysis Batch: 33137** 

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

Prep Batch: 32856

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F1	0.0998	0.06445	F1	mg/Kg		64	70 - 130	
Toluene	<0.00200	U F1	0.0998	0.06237	F1	mg/Kg		61	70 - 130	

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Page 8 of 20

### QC Sample Results

Job ID: 890-2770-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

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

Lab Sample ID: 890-2761-A-1-E MS Client Sample ID: Matrix Spike Prep Type: Total/NA

**Matrix: Solid** 

Analysis Batch: 33137

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00200	U F1	0.0998	0.05732	F1	mg/Kg		56	70 - 130	
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.1104	F1	mg/Kg		54	70 - 130	
o-Xylene	<0.00200	U F1	0.0998	0.06477	F1	mg/Kg		64	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	103	70 - 130
1,4-Difluorobenzene (Surr)	104	70 - 130

Lab Sample ID: 890-2761-A-1-F MSD

**Matrix: Solid** 

**Analysis Batch: 33137** 

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

Prep Batch: 32856

Prep Batch: 32856

Sample Sample Spike MSD MSD RPD Result Qualifier Result Qualifier RPD Limit Analyte babbA Unit %Rec Limits 0.0994 Benzene <0.00200 UF1 0.07479 mg/Kg 75 70 - 130 15 35 Toluene <0.00200 UF1 0.0994 0.06419 F1 mg/Kg 63 70 - 130 3 35 Ethylbenzene <0.00200 UF1 0.0994 0.06187 F1 61 70 - 130 8 35 mg/Kg 0.199 70 - 130 35 m-Xylene & p-Xylene <0.00401 UF1 0.1217 F1 mg/Kg 60 10 0.0994 <0.00200 UF1 0.06944 F1 69 70 - 130 o-Xylene mg/Kg

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	119		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

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

Lab Sample ID: MB 880-32517/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA Prep Batch: 32517

Analysis Batch: 32464

MB MB Result Qualifier RL Unit D Prepared Analyzed Dil Fac Analyte Gasoline Range Organics 50.0 08/19/22 13:54 08/19/22 20:12 <50.0 U mg/Kg (GRO)-C6-C10 50.0 08/19/22 13:54 08/19/22 20:12 Diesel Range Organics (Over <50.0 U mg/Kg C10-C28) OII Range Organics (Over C28-C36) <50.0 U 50.0 08/19/22 13:54 08/19/22 20:12 mg/Kg

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130	08/19/22 13:5	08/19/22 20:12	1
o-Terphenyl	79		70 - 130	08/19/22 13:54	08/19/22 20:12	1

Lab Sample ID: LCS 880-32517/2-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** 

C10-C28)

Analysis Batch: 32464							Prep	Batch: 32517
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1106		mg/Kg		111	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	984.6		mg/Kg		98	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

Job ID: 890-2770-1

Client: Ensolum Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

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

Lab Sample ID: LCS 880-32517/2-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 32464 Prep Batch: 32517

Surrog	ate	%Recovery	Qualifier	Limits
1-Chlor	rooctane	111		70 - 130
o-Terpl	henyl	107		70 - 130

LCS LCS

Lab Sample ID: LCSD 880-32517/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 32464 Prep Batch: 32517

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 1000 891.6 \*1 89 70 - 13021 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 963.8 96 mg/Kg 70 - 1302 20 C10-C28)

LCSD LCSD Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 108 101 70 - 130 o-Terphenyl

Lab Sample ID: 890-2762-A-21-C MS Client Sample ID: Matrix Spike

**Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 32464** Prep Batch: 32517

MS MS Sample Sample Spike Added Analyte Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <49.9 U \*1 F1 999 468.5 F1 mg/Kg 45 70 - 130

(GRO)-C6-C10 F2 Diesel Range Organics (Over 78.2 F1 999 515.8 F1 mg/Kg 44 70 - 130

70 - 130

C10-C28)

MS MS Surrogate %Recovery Qualifier Limits S1-70 - 130 1-Chlorooctane 64

56 S1-

Lab Sample ID: 890-2762-A-21-D MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 32464 Prep Batch: 32517

MSD MSD RPD Spike %Rec Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit 998 954.8 F2 Gasoline Range Organics <49.9 U \*1 F1 94 70 - 130 68 20 mg/Kg

(GRO)-C6-C10 F2 Diesel Range Organics (Over 78.2 F1 998 576.5 F1 mg/Kg 50 70 - 130 11 C10-C28)

MSD MSD %Recovery Qualifier Surrogate Limits 1-Chlorooctane 70 70 - 130 60 S1-70 - 130 o-Terphenyl

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o-Terphenyl

### QC Sample Results

Job ID: 890-2770-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-32574/1-A

Lab Sample ID: LCS 880-32574/2-A

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

Analysis Batch: 33396

**Matrix: Solid** 

**Matrix: Solid** 

Chloride

MB MB

Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 08/31/22 13:40

Client Sample ID: Lab Control Sample

90 - 110

**Prep Type: Soluble** 

100

Analysis Batch: 33396

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

250

Lab Sample ID: LCSD 880-32574/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid Prep Type: Soluble** 

250.7

mg/Kg

Analysis Batch: 33396

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit

Chloride 250 251.0 mg/Kg 100 90 - 110

Lab Sample ID: 890-2765-A-11-B MS Client Sample ID: Matrix Spike **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 33396 MS MS Sample Sample Spike %Rec

Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 20.3 251 288.6 107 90 - 110 mg/Kg

Lab Sample ID: 890-2765-A-11-C MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 33396

Sample Sample Spike MSD MSD %Rec RPD

Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit 251 Chloride 20.3 290.8 mg/Kg 108 90 - 110 20

## **QC Association Summary**

Client: Ensolum Job ID: 890-2770-1
Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

**GC VOA** 

Prep Batch: 32856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2770-1	BH02	Total/NA	Solid	5035	
890-2770-2	BH02A	Total/NA	Solid	5035	
MB 880-32856/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32856/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32856/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2761-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2761-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 33137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2770-1	BH02	Total/NA	Solid	8021B	32856
890-2770-2	BH02A	Total/NA	Solid	8021B	32856
MB 880-32856/5-A	Method Blank	Total/NA	Solid	8021B	32856
LCS 880-32856/1-A	Lab Control Sample	Total/NA	Solid	8021B	32856
LCSD 880-32856/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32856
890-2761-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	32856
890-2761-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	32856

Analysis Batch: 33242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2770-1	BH02	Total/NA	Solid	Total BTEX	
890-2770-2	BH02A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 32464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2770-1	BH02	Total/NA	Solid	8015B NM	32517
890-2770-2	BH02A	Total/NA	Solid	8015B NM	32517
MB 880-32517/1-A	Method Blank	Total/NA	Solid	8015B NM	32517
LCS 880-32517/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	32517
LCSD 880-32517/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	32517
890-2762-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	32517
890-2762-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	32517

Prep Batch: 32517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2770-1	BH02	Total/NA	Solid	8015NM Prep	
890-2770-2	BH02A	Total/NA	Solid	8015NM Prep	
MB 880-32517/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-32517/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-32517/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2762-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2762-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

**Analysis Batch: 32658** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2770-1	BH02	Total/NA	Solid	8015 NM	
890-2770-2	BH02A	Total/NA	Solid	8015 NM	

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## **QC Association Summary**

Client: Ensolum Job ID: 890-2770-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

HPLC/IC

Leach Batch: 32574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2770-1	BH02	Soluble	Solid	DI Leach	
890-2770-2	BH02A	Soluble	Solid	DI Leach	
MB 880-32574/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-32574/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-32574/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2765-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2765-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2770-1	BH02	Soluble	Solid	300.0	32574
890-2770-2	BH02A	Soluble	Solid	300.0	32574
MB 880-32574/1-A	Method Blank	Soluble	Solid	300.0	32574
LCS 880-32574/2-A	Lab Control Sample	Soluble	Solid	300.0	32574
LCSD 880-32574/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	32574
890-2765-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	32574
890-2765-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	32574

### Lab Chronicle

Client: Ensolum Job ID: 890-2770-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

Client Sample ID: BH02

Date Collected: 08/16/22 10:05 Date Received: 08/17/22 16:13

Lab Sample ID: 890-2770-1

**Matrix: Solid** 

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 32856 Total/NA Prep 5.05 g 5 mL 08/24/22 15:02 MR **EET MID** 8021B Total/NA Analysis 1 5 mL 5 mL 33137 08/29/22 01:22 MR **EET MID** Total/NA Analysis Total BTEX 33242 08/29/22 14:49 SM EET MID Total/NA 8015 NM 32658 08/22/22 13:19 **EET MID** Analysis 1 SM Total/NA 8015NM Prep 32517 08/19/22 13:54 EET MID Prep 10.00 g 10 mL DM Total/NA Analysis 8015B NM 32464 08/19/22 23:04 SM **EET MID** 

5.03 g

0 mL

50 mL

0 mL

32574

33396

08/21/22 17:07

08/31/22 16:10

Lab Sample ID: 890-2770-2

SMC

СН

**Matrix: Solid** 

**EET MID** 

**EET MID** 

Date Collected: 08/16/22 10:10 Date Received: 08/17/22 16:13

Client Sample ID: BH02A

Leach

Analysis

Soluble

Soluble

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	32856	08/24/22 15:02	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33137	08/29/22 01:42	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33242	08/29/22 14:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			32658	08/22/22 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	32517	08/19/22 13:54	DM	EET MID
Total/NA	Analysis	8015B NM		1			32464	08/19/22 23:26	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	32574	08/21/22 17:07	SMC	EET MID
Soluble	Analysis	300.0		1	0 mL	0 mL	33396	08/31/22 16:32	CH	EET MID

**Laboratory References:** 

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

DI Leach

300.0

## **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-2770-1 Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

### **Laboratory: Eurofins Midland**

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NI	ELAP	T104704400-22-24	06-30-23
The following analytes the agency does not of	. ,	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	

### **Method Summary**

Job ID: 890-2770-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

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

### **Protocol References:**

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

### Laboratory References:

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

### **Sample Summary**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2770-1

SDG: 03E1558094

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2770-1	BH02	Solid	08/16/22 10:05	08/17/22 16:13	0.5
890-2770-2	BH02A	Solid	08/16/22 10:10	08/17/22 16:13	1

Circle Method(s) and Metal(s) to be analyzed

ed by: (Signature

Received by: (Signature)

817/20

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

evised Date: 08/25/2020 Rev. 2020.

Total 200.7 / 6010

200.8 / 6020:

8RCRA 13PPM

Texas 11 Al Sb As Ba Be

ВС

Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se

Ag SiO<sub>2</sub> Na Sr Tl Sn U V Zn Hg: 1631 / 245.1 / 7470

/7471

Incident ID:NAPP2218642544

of service. Eurofine Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the cilent if such losses are due to circumstances beyond the control of Eurofins Xenco, A minimum charge of \$85.00 will be enforced unless previously negotiate.

votice: 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

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U

eurofins Xenco Environment

Sampler's Name:

oject Location:

EDDY COUNTY, NM

Due Date:

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

MeOH: Me HNO<sub>3</sub>: HN NaOH: Na

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

Kase Parker

Project Number:

roject Name:

Pierce Canyon 28 Battery

03E1558094

Samples Received Intact SAMPLE RECEIPT

Sample Custody Seals: Cooler Custody Seals:

Yes No

(A)

Temperature Reading: Correction Factor: Thermometer ID: (Yes)

CHLORIDES (EPA: 300.0)

Corrected Temperature:

Yes No

Temp Blank: B

8

Wet Ice:

8

**Parameters** 

Ö

Sample Identification

Matrix

Date

Time

Grab/

# of

TPH (8015)

BTEX (8021

890-2770 Chain of Custody

Cont

Sampled

8/16/2022 Sampled

> رة 10 Depth

8/16/2022

anan

Grab/ Grab/ Comp

×

×

BH02A BH02 City, State ZIP:

Address: Company Name: Project Manager:

3122 National parks Hwy

Carlsbad, NM 88220

Ben Belill

Ensolum, LLC

# Chain of Custody

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

None: NO DI Water: H <sub>2</sub> O				Rush Code	☑ Routine ☐ Rush	
Preservative Codes	QUEST	ANALYSIS REQUEST		Turn Around	Turn ,	
Other:	Deliverables: EDD		m	Email: bbelill@ensolum.com	Email: L	
/UST U TRRP U Level IVU	vel III	8220	Carlsbad, NM 88220	City, State ZIP:		
	State of Project:	Street	3104 E. Green Street	Address:		
ıfields ☐ RRC ☐ Superfund ☐	Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC	C.	XTO Energy, Inc.	Company Name:		
omments	Work Order Comments		Garrett Green	Bill to: (if different)		
Page1 of1	www.xenco.com	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	(575) 392-7550, Ca	Hobbs, NM		
		EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	( (915) 585-3443, Li	EL Paso, T)		
	Work Order No:	Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	432) 704-5440, San	Midland, TX (	esting	10

NaOH+Ascorbic Acid: SAPC

Sample Comments

Cost Center: 1081071001

Zn Acetate+NaOH: Zn

Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>: NaSO<sub>3</sub> NaHSO<sub>4</sub>: NABIS H3PO4: HP

### **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2770-1

SDG Number: 03E1558094

Login Number: 2770 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

/ UJ 133

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### **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2770-1 SDG Number: 03E1558094

Login Number: 2770

List Source: Eurofins Midland
List Number: 2

List Creation: 08/19/22 10:36 AM

Creator: Rodriguez, Leticia

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

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<6mm (1/4").



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2771-1

Laboratory Sample Delivery Group: 03E1558094 Client Project/Site: Pierce Canyon 28 Battery

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/31/2022 8:18:44 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum Project/Site: Pierce Canyon 28 Battery

Laboratory Job ID: 890-2771-1 SDG: 03E1558094

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### **Definitions/Glossary**

Job ID: 890-2771-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

### **Qualifiers**

**GC VOA** Qualifier **Qualifier Description** 

F1 MS and/or MSD recovery exceeds control limits.

F2 MS/MSD RPD exceeds control limits

U Indicates the analyte was analyzed for but not detected.

### **GC Semi VOA**

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

### **HPLC/IC**

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

### **Glossary**

DLC

Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	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

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) Minimum Detectable Concentration (Radiochemistry) MDC

Decision Level Concentration (Radiochemistry)

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

NC Not Calculated

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

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

PRES Presumptive QC **Quality Control** 

RER Relative Error Ratio (Radiochemistry)

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

### Case Narrative

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2771-1

SDG: 03E1558094

Job ID: 890-2771-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2771-1

### Receipt

The samples were received on 8/17/2022 4:13 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 5.2°C

### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-32857 and analytical batch 880-33138 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.

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

### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (890-2762-A-21-B), (890-2762-A-21-C MS) and (890-2762-A-21-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following samples were outside control limits: BH05 (890-2771-1) and BH05A (890-2771-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: The method blank for preparation batch 880-32517 and analytical batch 880-32464 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-32517 and analytical batch 880-32464 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-32517 and analytical batch 880-32464 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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

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

Matrix: Solid

Lab Sample ID: 890-2771-1

Client: Ensolum Job ID: 890-2771-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

**Client Sample ID: BH05** 

Date Collected: 08/16/22 10:45 Date Received: 08/17/22 16:13

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F2 F1	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:28	1
Toluene	<0.00200	U F2 F1	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:28	1
Ethylbenzene	<0.00200	U F2 F1	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:28	1
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.00401	mg/Kg		08/24/22 15:15	08/29/22 04:28	1
o-Xylene	<0.00200	U F2 F1	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:28	1
Xylenes, Total	<0.00401	U F2 F1	0.00401	mg/Kg		08/24/22 15:15	08/29/22 04:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			08/24/22 15:15	08/29/22 04:28	1
1,4-Difluorobenzene (Surr)	99		70 - 130			08/24/22 15:15	08/29/22 04:28	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mathada 0045 NM - Discal Danse	O	0) (00)						
Method: 8015 NM - Diesel Range Analyte	•	O) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/22/22 13:19	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0	mg/Kg		08/19/22 13:54	08/19/22 23:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/19/22 23:48	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/19/22 23:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	51	S1-	70 - 130			08/19/22 13:54	08/19/22 23:48	1
o-Terphenyl	47	S1-	70 - 130			08/19/22 13:54	08/19/22 23:48	1
Method: 300.0 - Anions, Ion Chro	omatography -							
Analyte	Result	Qualifier	4.96	Unit mg/Kg	D	Prepared	Analyzed 08/31/22 16:39	Dil Fac

Client Sample ID: BH05A

Date Collected: 08/16/22 10:50 Date Received: 08/17/22 16:13

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:49	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:49	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:49	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		08/24/22 15:15	08/29/22 04:49	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:49	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		08/24/22 15:15	08/29/22 04:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130			08/24/22 15:15	08/29/22 04:49	1

**Eurofins Carlsbad** 

Lab Sample ID: 890-2771-2

Matrix: Solid

Date Collected: 08/16/22 10:50

Date Received: 08/17/22 16:13

### **Client Sample Results**

Client: Ensolum Job ID: 890-2771-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

Client Sample ID: BH05A

%Recovery Qualifier

38 S1-

Lab Sample ID: 890-2771-2

Analyzed

08/20/22 00:10

Dil Fac

Matrix: Solid

Sample Depth: 1

Surrogate

1-Chlorooctane

Method: 8021B - Volatile Organic	Compounds (	GC) (Conti	nued)					
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	108		70 - 130			08/24/22 15:15	08/29/22 04:49	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			08/29/22 15:04	1
Method: 8015 NM - Diesel Range (	•				_			
Total TPH	<50.0	Qualifier U	50.0	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 08/22/22 13:19	Dil Fac
	<50.0	U			D	Prepared		Dil Fac
Total TPH	<50.0	U			<u>D</u>	Prepared		Dil Fac Dil Fac
Total TPH  Method: 8015B NM - Diesel Range	<50.0	RO) (GC) Qualifier	50.0	mg/Kg			08/22/22 13:19	1
Total TPH  Method: 8015B NM - Diesel Range Analyte  Gasoline Range Organics	<50.0  Corganics (DI Result	U (GC) Qualifier U *1	50.0	mg/Kg		Prepared	08/22/22 13:19  Analyzed	1

o-Terphenyl	34	S1-	70 - 130			08/19/22 13:54	08/20/22 00:10	1
Method: 300.0 - Anions, Ion Chron	natography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.0		4.99	mg/Kg			08/31/22 16:46	1

Limits

70 - 130

Prepared

08/19/22 13:54

### **Surrogate Summary**

Client: Ensolum Job ID: 890-2771-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2771-1	BH05	102	99	
890-2771-1 MS	BH05	86	108	
890-2771-1 MSD	BH05	94	102	
890-2771-2	BH05A	96	108	
LCS 880-32857/1-A	Lab Control Sample	101	96	
LCSD 880-32857/2-A	Lab Control Sample Dup	98	96	
MB 880-32857/5-A	Method Blank	84	114	
MB 880-33026/5-A	Method Blank	78	121	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2762-A-21-C MS	Matrix Spike	64 S1-	56 S1-
890-2762-A-21-D MSD	Matrix Spike Duplicate	70	60 S1-
890-2771-1	BH05	51 S1-	47 S1-
890-2771-2	BH05A	38 S1-	34 S1-
LCS 880-32517/2-A	Lab Control Sample	111	107
LCSD 880-32517/3-A	Lab Control Sample Dup	108	101
MB 880-32517/1-A	Method Blank	78	79

**Surrogate Legend** 

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2771-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-32857/5-A

**Matrix: Solid Analysis Batch: 33138**  Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 32857

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/24/22 15:15	08/29/22 04:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/24/22 15:15	08/29/22 04:00	1

мв мв

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prep	pared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130	08/24/2	22 15:15	08/29/22 04:00	1
1,4-Difluorobenzene (Surr)	114		70 - 130	08/24/2	22 15:15	08/29/22 04:00	1

Lab Sample ID: LCS 880-32857/1-A

Matrix: Solid

Analysis Batch: 33138

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 32857

-	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.100	0.09205		mg/Kg		92	70 - 130
Toluene	0.100	0.1038		mg/Kg		104	70 - 130
Ethylbenzene	0.100	0.1055		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	0.200	0.1968		mg/Kg		98	70 - 130
o-Xylene	0.100	0.1045		mg/Kg		105	70 - 130

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	101	70 - 130
1,4-Difluorobenzene (Surr)	96	70 - 130

Lab Sample ID: LCSD 880-32857/2-A

**Matrix: Solid** 

Analysis Batch: 33138

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

Prep Type: Total/NA Prep Batch: 32857

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09149		mg/Kg		91	70 - 130	1	35
Toluene	0.100	0.1010		mg/Kg		101	70 - 130	3	35
Ethylbenzene	0.100	0.1023		mg/Kg		102	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1907		mg/Kg		95	70 - 130	3	35
o-Xylene	0.100	0.1015		mg/Kg		102	70 - 130	3	35

LCSD LCSD

Surrogate	%Recovery 0	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1.4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 890-2771-1 MS

**Matrix: Solid** 

**Analysis Batch: 33138** 

Client Sample ID: BH05 Prep Type: Total/NA

Prep Batch: 32857

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F2 F1	0.101	0.06187	F1	mg/Kg		62	70 - 130	
Toluene	<0.00200	U F2 F1	0.101	0.05727	F1	mg/Kg		57	70 - 130	

Client Sample ID: BH05

Prep Type: Total/NA

### QC Sample Results

Job ID: 890-2771-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

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

Lab Sample ID: 890-2771-1 MS **Matrix: Solid** 

Analysis Batch: 33138										Batch: 32857
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00200	U F2 F1	0.101	0.05818	F1	mg/Kg		58	70 - 130	
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.201	0.09724	F1	mg/Kg		48	70 - 130	
o-Xylene	<0.00200	U F2 F1	0.101	0.05296	F1	mg/Kg		53	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	86	70 - 130
1.4-Difluorobenzene (Surr)	108	70 - 130

Lab Sample ID: 890-2771-1 MSD

**Matrix: Solid** 

**Analysis Batch: 33138** 

**Client Sample ID: BH05** Prep Type: Total/NA Prep Batch: 32857 Sample Sample Spike MSD MSD

Result Qualifier Added Result Qualifier RPD Limit Analyte %Rec Limits Unit 0.0998 Benzene <0.00200 U F2 F1 0.09682 F2 mg/Kg 97 70 - 130 44 35 0.0998 Toluene <0.00200 U F2 F1 0.09590 F2 mg/Kg 96 70 - 130 50 35 Ethylbenzene <0.00200 U F2 F1 0.0998 0.09225 F2 92 70 - 130 45 35 mg/Kg 0.200 0.1688 F2 85 70 - 130 35 m-Xylene & p-Xylene <0.00401 U F2 F1 mg/Kg 54 0.0998 <0.00200 U F2 F1 0.08965 F2 90 70 - 130 51 o-Xylene mg/Kg

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	94	70 - 130
1,4-Difluorobenzene (Surr)	102	70 - 130

Lab Sample ID: MB 880-33026/5-A

**Matrix: Solid** 

**Analysis Batch: 33138** 

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 33026

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/26/22 09:25	08/28/22 16:24	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130	08/26/22 09:25	08/28/22 16:24	1
1,4-Difluorobenzene (Surr)	121		70 - 130	08/26/22 09:25	08/28/22 16:24	1

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

Lab Sample ID: MB 880-32517/1-A

**Matrix: Solid** 

Analysis Batch: 32464

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

Prep Batch: 32517

мв мв Result Qualifier RL Unit Prepared Gasoline Range Organics <50.0 U 50.0 mg/Kg 08/19/22 13:54 08/19/22 20:12

(GRO)-C6-C10

Job ID: 890-2771-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

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

Lab Sample ID: MB 880-32517/1-A **Matrix: Solid** 

Analysis Batch: 32464

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 32517

mg/Kg

MB MB Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac <50.0 U 50.0 08/19/22 13:54 08/19/22 20:12 Diesel Range Organics (Over mg/Kg C10-C28) OII Range Organics (Over C28-C36) 50.0 08/19/22 13:54 08/19/22 20:12 <50.0 U mg/Kg

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130	08/19/22 13:54	08/19/22 20:12	1
o-Terphenyl	79		70 - 130	08/19/22 13:54	08/19/22 20:12	1

Lab Sample ID: LCS 880-32517/2-A

Matrix: Solid

Matrix: Solid							Prep T	ype: Total/NA
Analysis Batch: 32464							Prep	Batch: 32517
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1106		mg/Kg		111	70 - 130	

984.6

1000

(GRO)-C6-C10 Diesel Range Organics (Over

C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: LCSD 880-32517/3-A

**Matrix: Solid** 

C10-C28)

Analysis Batch: 32464

Analysis Datch. 32404							1 1 Ch	Datell.	32317	
	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	891.6	*1	mg/Kg		89	70 - 130	21	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	963.8		ma/Ka		96	70 - 130	2	20	

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 108 70 - 130 o-Terphenyl 101 70 - 130

Lab Sample ID: 890-27

**Matrix: Solid** 

Analysis Batch: 32464

700 A 04 O NO	Oliont Commis ID: Matrix Online
762-A-21-C MS	Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 32517

Prep Type: Total/NA

Pron Batch: 32517

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits <49.9 U \*1 F1 999 468.5 F1 45 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 F2 78.2 F1 999 515.8 F1 Diesel Range Organics (Over mg/Kg 44 70 - 130

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	64	S1-	70 - 130
o-Terphenyl	56	S1-	70 - 130

**Eurofins Carlsbad** 

**Client Sample ID: Lab Control Sample** 

70 - 130

Client Sample ID: Lab Control Sample Dup

### QC Sample Results

Client: Ensolum Job ID: 890-2771-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

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

Lab Sample ID: 890-2762-A-21-D MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** 

Prep Type: Total/NA Analysis Batch: 32464 Prep Batch: 32517

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U *1 F1	998	954.8	F2	mg/Kg		94	70 - 130	68	20
(GRO)-C6-C10		F2									
Diesel Range Organics (Over	78.2	F1	998	576.5	F1	mg/Kg		50	70 - 130	11	20
C10-C28)											

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	70		70 - 130
o-Terphenyl	60	S1-	70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-32574/1-A Client Sample ID: Method Blank **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 33396

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			08/31/22 13:40	1

Lab Sample ID: LCS 880-32574/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 33396** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	250.7	,	mg/Kg		100	90 - 110	 

Lab Sample ID: LCSD 880-32574/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 33396

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	251.0		ma/Ka		100	90 110		20	

Lab Sample ID: 890-2765-A-11-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 33396

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	20.3		251	288 6		ma/Ka		107	90 110		_

Lab Sample ID: 890-2765-A-11-C MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** 

Analysis Batch: 33396

Alialysis Datell. 33330											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	20.3		251	290.8		mg/Kg		108	90 - 110	1	20

**Eurofins Carlsbad** 

**Prep Type: Soluble** 

### **QC Association Summary**

Client: Ensolum Job ID: 890-2771-1 Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

### **GC VOA**

### Prep Batch: 32857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2771-1	BH05	Total/NA	Solid	5035	
890-2771-2	BH05A	Total/NA	Solid	5035	
MB 880-32857/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32857/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32857/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2771-1 MS	BH05	Total/NA	Solid	5035	
890-2771-1 MSD	BH05	Total/NA	Solid	5035	

### Prep Batch: 33026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-33026/5-A	Method Blank	Total/NA	Solid	5035	

### **Analysis Batch: 33138**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2771-1	BH05	Total/NA	Solid	8021B	32857
890-2771-2	BH05A	Total/NA	Solid	8021B	32857
MB 880-32857/5-A	Method Blank	Total/NA	Solid	8021B	32857
MB 880-33026/5-A	Method Blank	Total/NA	Solid	8021B	33026
LCS 880-32857/1-A	Lab Control Sample	Total/NA	Solid	8021B	32857
LCSD 880-32857/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32857
890-2771-1 MS	BH05	Total/NA	Solid	8021B	32857
890-2771-1 MSD	BH05	Total/NA	Solid	8021B	32857

### **Analysis Batch: 33247**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2771-1	BH05	Total/NA	Solid	Total BTEX	
890-2771-2	BH05A	Total/NA	Solid	Total BTEX	

### GC Semi VOA

### Analysis Batch: 32464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2771-1	BH05	Total/NA	Solid	8015B NM	32517
890-2771-2	BH05A	Total/NA	Solid	8015B NM	32517
MB 880-32517/1-A	Method Blank	Total/NA	Solid	8015B NM	32517
LCS 880-32517/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	32517
LCSD 880-32517/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	32517
890-2762-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	32517
890-2762-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	32517

### Prep Batch: 32517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2771-1	BH05	Total/NA	Solid	8015NM Prep	
890-2771-2	BH05A	Total/NA	Solid	8015NM Prep	
MB 880-32517/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-32517/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-32517/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2762-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2762-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

# **QC Association Summary**

Client: Ensolum
Project/Site: Pierce Canyon 28 Battery
SDG: 03E1558094

GC Semi VOA

Analysis Batch: 32659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2771-1	BH05	Total/NA	Solid	8015 NM	
890-2771-2	BH05A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 32574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2771-1	BH05	Soluble	Solid	DI Leach	
890-2771-2	BH05A	Soluble	Solid	DI Leach	
MB 880-32574/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-32574/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-32574/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2765-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2765-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2771-1	BH05	Soluble	Solid	300.0	32574
890-2771-2	BH05A	Soluble	Solid	300.0	32574
MB 880-32574/1-A	Method Blank	Soluble	Solid	300.0	32574
LCS 880-32574/2-A	Lab Control Sample	Soluble	Solid	300.0	32574
LCSD 880-32574/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	32574
890-2765-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	32574
890-2765-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	32574

**Eurofins Carlsbad** 

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### **Lab Chronicle**

Client: Ensolum Job ID: 890-2771-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

**Client Sample ID: BH05** 

Date Collected: 08/16/22 10:45 Date Received: 08/17/22 16:13 Lab Sample ID: 890-2771-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	32857	08/24/22 15:15	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33138	08/29/22 04:28	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33247	08/29/22 15:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			32659	08/22/22 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32517	08/19/22 13:54	DM	EET MID
Total/NA	Analysis	8015B NM		1			32464	08/19/22 23:48	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	32574	08/21/22 17:07	SMC	EET MID
Soluble	Analysis	300.0		1	0 mL	0 mL	33396	08/31/22 16:39	CH	EET MID

Client Sample ID: BH05A Lab Sample ID: 890-2771-2 Matrix: Solid

Date Collected: 08/16/22 10:50

Date Received: 08/17/22 16:13

	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	32857	08/24/22 15:15	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33138	08/29/22 04:49	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33247	08/29/22 15:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			32659	08/22/22 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32517	08/19/22 13:54	DM	EET MID
Total/NA	Analysis	8015B NM		1			32464	08/20/22 00:10	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	32574	08/21/22 17:07	SMC	EET MID
Soluble	Analysis	300.0		1	0 mL	0 mL	33396	08/31/22 16:46	CH	EET MID

**Laboratory References:** 

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

## **Accreditation/Certification Summary**

Client: Ensolum
Project/Site: Pierce Canyon 28 Battery
SDG: 03E1558094

**Laboratory: Eurofins Midland** 

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NI	ELAP	T104704400-22-24	06-30-23
The following analytes the agency does not o		ut the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes for which
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	
00.0				

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### **Method Summary**

Job ID: 890-2771-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

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

### **Protocol References:**

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

### Laboratory References:

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

### **Sample Summary**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2771-1

SDG: 03E1558094

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2771-1	BH05	Solid	08/16/22 10:45	08/17/22 16:13	0.5
890-2771-2	BH05A	Solid	08/16/22 10:50	08/17/22 16:13	1

Xenca

Company Name: Project Manager:

Ben Belill Ensolum, LLC

Bill to: (if different) Company Name:

3104 E. Green Street XTO Energy, Inc. Garrett Green

3122 National parks Hwy

# **Chain of Custody**

Midland, TX (432) 704-5440, San Antonio, TX (210) 509 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-0 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

1-3334	WORK Order No.
1296	
3199	
	www.xenco.com Page1_ of1
	Work Order Comments
	Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
	State of Project:
	Reporting: Level II  Level III  PST/UST  TRRP  Level IV
	Deliverables: EDD

	5	3	Br. 10 .	Relinquisped by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010									вно5А	ВН05	Sample Identification	Total Containers:	Sample Custody Seals	Cooler Custody Seals:	Samples Received Intact:	SAMPLE RECEIPT	PO#:	Sampler's Name:	Project Location:	Project Number:	Project Name:	Phone: 9	City, State ZIP: C
			m	(Signature)	cument and relinquishme will be liable only for the um charge of \$85.00 will	Metal(s) to be ana	0 200.8 / 6020:									S	S	ication Matrix		Yes No	Yes No NA	ict: (Yes) No	Temp Blank:		Kase Parker	EDDY COUNTY, NM	03E1558094	Pierce Canyon 28 Battery	9898540852	Carlsbad, NM 88220
		(	100	Received	nt of samples const cost of samples and be applied to each p	lyzed	8F									8/16/2022	8/16/2022	Date Sampled	Corrected Temperature	N/A Temperature Reading	Correction Factor:	Thermometer ID:	Yes (No )		ker		)94	28 Battery		
		4	$\mathcal{O} \mathcal{M}$	Received by: (Signature	itutes a valid purch shall not assume : roject and a charge	TCLP / SPL	8RCRA 13PPM					-				1050 1	1043 0.5	Time D	-	-		Ē	Wet Ice:	the lab, if received by 4:30pm	TAT starts the day received by	Due Date:	Routine	Turn Around	Email: bb	Cit
				e)	nase order from a eny responsibilit e of \$5 for each a	TCLP / SPLP 6010: 8RCRA	Texas 11 Al Sb As Ba									Grab/	5' Grab/	Depth Grab/	5. 2	1.	0	500 mm	Yes (No)	ed by 4:30pm	ly received by		Rush	ound	Email: bbelill@ensolum.com	City, State ZIP:
			of:		ilent con y for any ample su	D IR	AS IS									1		# of Cont			P	araı	nete	ers			Code		m.com	
			17.22	Date/Time	npany to I losses or ibmitted t	Sb As	As B			4						×	×	CHLO			PA	300	).0)				_			arlsbac
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Revised Da						Hg: 1631 / 245.1 / 7470 / 7471	Sr TI Sn U V Zn			icident ID:NA	10.51						Cost Cente	Sample	aUH+Ascorbi	Zn Acetate+NaOH: Zn	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> NaSO <sub>3</sub>	NaHSO <sub>4</sub> : NABIS	H₃PO₄: HP	H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub>	HCL: HC	Cool: Cool	None: NO	Preserva	Other	
Revised Date: 08/25/2020 Rev. 2020.2				Date/Time		/7471	V Zn			Incident ID:NAPPZZ 1004Z344	\DD331964364						Cost Center: 1081071001	Sample Comments	NaUH+Ascorbic Acid: SAPC	OH: Zn	3	, G	1	NaCH: Na	HNC3: HN	MeOH: Me	DI Water: H <sub>2</sub> O	Preservative Codes		Reporting: Level III C F3/03/ C IXXY C Level V C
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### **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2771-1

SDG Number: 03E1558094

Login Number: 2771 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or ampered 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	
s the Field Sampler's name present on COC?	True	
here 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	
ppropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
here 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: 890-2771-1 SDG Number: 03E1558094

Login Number: 2771 **List Source: Eurofins Midland** List Number: 2 List Creation: 08/19/22 10:36 AM

Creator: Rodriguez, Leticia

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

<6mm (1/4").



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2772-1

Laboratory Sample Delivery Group: 03E1558094 Client Project/Site: Pierce Canyon 28 Battery

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/31/2022 8:19:07 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: Pierce Canyon 28 Battery

Laboratory Job ID: 890-2772-1 SDG: 03E1558094

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### **Definitions/Glossary**

Client: Ensolum Job ID: 890-2772-1 Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

### **Qualifiers**

G	C	٧	O	A

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

Indicates the analyte was analyzed for but not detected.

### **GC Semi VOA**

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

Qualifier	Qualifier Description
11	Indicates the analyte was analyzed for but not detec

### **Glossary**

DLC

Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	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

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) Minimum Detectable Concentration (Radiochemistry) MDC

Decision Level Concentration (Radiochemistry)

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

NC Not Calculated

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

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

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

RER Relative Error Ratio (Radiochemistry)

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

### **Case Narrative**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2772-1

SDG: 03E1558094

Job ID: 890-2772-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2772-1

### Receipt

The samples were received on 8/17/2022 4:13 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 5.2°C

### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-32857 and analytical batch 880-33138 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.

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

### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (890-2762-A-21-B), (890-2762-A-21-C MS) and (890-2762-A-21-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: BH03 (890-2772-1) and BH03A (890-2772-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: The method blank for preparation batch 880-32517 and analytical batch 880-32464 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD\_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-32517 and analytical batch 880-32464 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-32517 and analytical batch 880-32464 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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

### HPLC/IC

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

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Matrix: Solid

Lab Sample ID: 890-2772-1

## **Client Sample Results**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

Client Sample ID: BH03

Date Collected: 08/16/22 10:15 Date Received: 08/17/22 16:13

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/24/22 15:15	08/29/22 05:09	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/24/22 15:15	08/29/22 05:09	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		08/24/22 15:15	08/29/22 05:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/24/22 15:15	08/29/22 05:09	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		08/24/22 15:15	08/29/22 05:09	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/24/22 15:15	08/29/22 05:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			08/24/22 15:15	08/29/22 05:09	1
1,4-Difluorobenzene (Surr)	103		70 - 130			08/24/22 15:15	08/29/22 05:09	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/29/22 15:04	1
Made de 0045 NM - Diagraph Danier		0) (00)						
Method: 8015 NM - Diesel Range Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH			50.0	mg/Kg		Prepareu	08/22/22 13:19	1
- -	<b>\30.0</b>	U	50.0	mg/Kg			00/22/22 13.19	
								'
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						,
	• •	RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10	• •	Qualifier	RL 50.0	<mark>Unit</mark> mg/Kg	D	Prepared 08/19/22 13:54	Analyzed 08/20/22 00:31	·
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U *1			<u>D</u>	<u>·</u>		Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10	Result   <50.0	Qualifier U *1	50.0	mg/Kg	<u> </u>	08/19/22 13:54	08/20/22 00:31	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0 <50.0	Qualifier U *1 U	50.0	mg/Kg	<u> </u>	08/19/22 13:54 08/19/22 13:54	08/20/22 00:31 08/20/22 00:31	
Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <50.0   <50.0   <50.0	Qualifier U *1 U	50.0 50.0 50.0	mg/Kg	<u>D</u>	08/19/22 13:54 08/19/22 13:54 08/19/22 13:54	08/20/22 00:31 08/20/22 00:31 08/20/22 00:31	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate	Result	Qualifier U*1 U Qualifier	50.0 50.0 50.0 <i>Limits</i>	mg/Kg	<u>D</u>	08/19/22 13:54 08/19/22 13:54 08/19/22 13:54  Prepared	08/20/22 00:31 08/20/22 00:31 08/20/22 00:31 Analyzed	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result	Qualifier U*1 U  Qualifier S1- S1-	50.0 50.0 50.0 <b>Limits</b> 70 - 130	mg/Kg	<u> </u>	08/19/22 13:54  08/19/22 13:54  08/19/22 13:54  Prepared  08/19/22 13:54	08/20/22 00:31 08/20/22 00:31 08/20/22 00:31 Analyzed 08/20/22 00:31	Dil Fac  1  1  1  Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U*1 U  Qualifier S1- S1-	50.0 50.0 50.0 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	08/19/22 13:54  08/19/22 13:54  08/19/22 13:54  Prepared  08/19/22 13:54	08/20/22 00:31 08/20/22 00:31 08/20/22 00:31 Analyzed 08/20/22 00:31	Dil Fac  1  1  1  Dil Fac

Client Sample ID: BH03A

Date Collected: 08/16/22 10:20 Date Received: 08/17/22 16:13

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 05:30	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 05:30	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 05:30	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		08/24/22 15:15	08/29/22 05:30	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 05:30	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		08/24/22 15:15	08/29/22 05:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			08/24/22 15:15	08/29/22 05:30	1

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Lab Sample ID: 890-2772-2

**Matrix: Solid** 

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Matrix: Solid

Lab Sample ID: 890-2772-2

#### **Client Sample Results**

Client: Ensolum Job ID: 890-2772-1
Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

Client Sample ID: BH03A Date Collected: 08/16/22 10:20

Date Received: 08/17/22 16:13 Sample Depth: 1

o-Terphenyl

Method: 8021B - Volatile Organic Compounds (GC) (Continued)									
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Difluorobenzene (Surr)	102		70 - 130	08/24/22 15:15	08/29/22 05:30	1			

Method: Total BTEX - Total BTEX C	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			08/29/22 15:04	•

Method: 8015 NM - Diesel Range O	rganics (DRO) (GC)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg			08/22/22 13:19	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0	mg/Kg		08/19/22 13:54	08/20/22 00:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/20/22 00:53	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/20/22 00:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	51	S1-	70 - 130			08/19/22 13:54	08/20/22 00:53	1

Method: 300.0 - Anions, Ion Chromatography - Soluble									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	80.9		5.00	mg/Kg			08/31/22 17:00	1

70 - 130

47 S1-

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## **Surrogate Summary**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2771-A-1-C MS	Matrix Spike	86	108	
890-2771-A-1-D MSD	Matrix Spike Duplicate	94	102	
890-2772-1	BH03	98	103	
890-2772-2	BH03A	94	102	
LCS 880-32857/1-A	Lab Control Sample	101	96	
LCSD 880-32857/2-A	Lab Control Sample Dup	98	96	
MB 880-32857/5-A	Method Blank	84	114	
MB 880-33026/5-A	Method Blank	78	121	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2762-A-21-C MS	Matrix Spike	64 S1-	56 S1-
890-2762-A-21-D MSD	Matrix Spike Duplicate	70	60 S1-
890-2772-1	BH03	61 S1-	55 S1-
890-2772-2	BH03A	51 S1-	47 S1-
LCS 880-32517/2-A	Lab Control Sample	111	107
LCSD 880-32517/3-A	Lab Control Sample Dup	108	101
MB 880-32517/1-A	Method Blank	78	79

**Surrogate Legend** 

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Ensolum Job ID: 890-2772-1 Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

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

Lab Sample ID: MB 880-32857/5-A

Lab Sample ID: LCS 880-32857/1-A

**Matrix: Solid** 

**Analysis Batch: 33138** 

Analysis Batch: 33138

**Matrix: Solid** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 32857

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/24/22 15:15	08/29/22 04:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/24/22 15:15	08/29/22 04:00	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130	_	08/24/22 15:15	08/29/22 04:00	1
1,4-Difluorobenzene (Surr)	114		70 - 130		08/24/22 15:15	08/29/22 04:00	1

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 32857

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.09205 mg/Kg 92 70 - 130 Toluene 0.100 0.1038 mg/Kg 104 70 - 130 0.100 105 Ethylbenzene 0.1055 mg/Kg 70 - 130 0.200 0.1968 98 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 70 - 130 o-Xylene 0.1045 mg/Kg 105

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Lab Sample ID: LCSD 880-32857/2-A

Analysis Batch: 33138

Prep Type: Total/NA Prep Batch: 32857

	<b>Spike</b>	LCSD	LC2D				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.09149		mg/Kg		91	70 - 130	1	35	
Toluene	0.100	0.1010		mg/Kg		101	70 - 130	3	35	
Ethylbenzene	0.100	0.1023		mg/Kg		102	70 - 130	3	35	
m-Xylene & p-Xylene	0.200	0.1907		mg/Kg		95	70 - 130	3	35	
o-Xylene	0.100	0.1015		mg/Kg		102	70 - 130	3	35	

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	98	70 - 130
1,4-Difluorobenzene (Surr)	96	70 - 130

Lab Sample ID: 890-2771-A-1-C MS

**Matrix: Solid** 

**Analysis Batch: 33138** 

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

Prep Batch: 32857

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F2 F1	0.101	0.06187	F1	mg/Kg		62	70 - 130	
Toluene	<0.00200	U F2 F1	0.101	0.05727	F1	mg/Kg		57	70 - 130	

#### QC Sample Results

Client: Ensolum Job ID: 890-2772-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

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

Lab Sample ID: 890-2771-A-1-C MS

Lab Sample ID: 890-2771-A-1-D MSD

**Matrix: Solid** 

Analysis Batch: 33138

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

Prep Batch: 32857

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Ethylbenzene <0.00200 U F2 F1 0.101 0.05818 F1 58 70 - 130 mg/Kg m-Xylene & p-Xylene <0.00401 U F2 F1 0.201 0.09724 F1 mg/Kg 48 70 - 130 0.101 0.05296 F1 o-Xylene <0.00200 U F2 F1 53 70 - 130 mg/Kg

MS MS

Surrogate	%Recovery Qual	lifier Limits
4-Bromofluorobenzene (Surr)	86	70 - 130
1,4-Difluorobenzene (Surr)	108	70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 32857

**Matrix: Solid Analysis Batch: 33138** MSD MSD Sample Sample Spike

Result Qualifier Added Result Qualifier RPD Limit Analyte Unit %Rec Limits 0.0998 Benzene <0.00200 U F2 F1 0.09682 F2 mg/Kg 97 70 - 130 44 35 0.0998 Toluene <0.00200 U F2 F1 0.09590 F2 mg/Kg 96 70 - 130 50 35 Ethylbenzene <0.00200 U F2 F1 0.0998 0.09225 F2 92 70 - 130 45 35 mg/Kg 0.200 0.1688 F2 70 - 130 35 m-Xylene & p-Xylene <0.00401 U F2 F1 mg/Kg 54 0.0998 <0.00200 U F2 F1 0.08965 F2 90 70 - 130 51 o-Xylene mg/Kg

MSD MSD

l	Surrogate	%Recovery	Qualifier	Limits
	4-Bromofluorobenzene (Surr)	94		70 - 130
	1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: MB 880-33026/5-A Client Sample ID: Method Blank **Matrix: Solid** 

Analysis Batch: 33138

Prep Type: Total/NA Prep Batch: 33026

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/26/22 09:25	08/28/22 16:24	1

MB MB

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130	08/26/22 09:25	08/28/22 16:24	1
1,4-Difluorobenzene (Surr)	121		70 - 130	08/26/22 09:25	08/28/22 16:24	1

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

Lab Sample ID: MB 880-32517/1-A

**Matrix: Solid** 

Analysis Batch: 32464

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

Prep Batch: 32517

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/19/22 20:12	1	

(GRO)-C6-C10

Client: Ensolum

Job ID: 890-2772-1

SDG: 03E1558094

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

Lab Sample ID: MB 880-32517/1-A

Lab Sample ID: LCS 880-32517/2-A

Project/Site: Pierce Canyon 28 Battery

**Matrix: Solid** 

**Matrix: Solid** 

C10-C28)

Analysis Batch: 32464

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 32517

	1410	11.10						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/19/22 20:12	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/19/22 20:12	1

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130	08/19/22 13:54	08/19/22 20:12	1
o-Terphenyl	79		70 - 130	08/19/22 13:54	08/19/22 20:12	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 32517

Analysis Batch: 32464 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1106 111 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 984.6 mg/Kg 98 70 - 130

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: LCSD 880-32517/3-A

**Matrix: Solid** 

Analysis Batch: 32464

Client Samp	le ID: Lab	Control	Sample Dup

Prep Type: Total/NA

Prep Batch: 32517

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	891.6	*1	mg/Kg		89	70 - 130	21	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	963.8		mg/Kg		96	70 - 130	2	20	
C10-C28)										

LCSD LCSD Surrogate

%Recovery Qualifier Limits 1-Chlorooctane 108 70 - 130 o-Terphenyl 101 70 - 130

Lab Sample ID: 890-2762-A-21-C MS

**Matrix: Solid** 

Analysis Batch: 32464

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 32517

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics	<49.9	U *1 F1	999	468.5	F1	mg/Kg		45	70 - 130
(GRO)-C6-C10		F2							
Diesel Range Organics (Over	78.2	F1	999	515.8	F1	mg/Kg		44	70 - 130

C10-C28)

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	64	S1-	70 - 130
o-Terphenyl	56	S1-	70 - 130

#### QC Sample Results

Job ID: 890-2772-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

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

Lab Sample ID: 890-2762-A-21-D MSD	Client Sample ID: Matrix Spike Duplicate
Matrix: Solid	Prep Type: Total/NA

Analysis Batch: 32464 Prep Batch: 32517

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	<49.9	U *1 F1	998	954.8	F2	mg/Kg		94	70 - 130	68	20	
(GRO)-C6-C10		F2										
Diesel Range Organics (Over	78.2	F1	998	576.5	F1	mg/Kg		50	70 - 130	11	20	
C10-C28)												

MSD MSD Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 70 o-Terphenyl 60 S1-70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-32574/1-A Client Sample ID: Method Blank

**Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 33396

мв мв

Analyte	Result (	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 l	U	5.00	mg/Kg			08/31/22 13:40	1

Lab Sample ID: LCS 880-32574/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 33396** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	250.7		mg/Kg		100	90 - 110	 

Lab Sample ID: LCSD 880-32574/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 33396

Spike LCSD LCSD RPD %Rec Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 251.0 100 90 - 110 mg/Kg

Lab Sample ID: 890-2765-A-11-B MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

Analysis Batch: 33396

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	20.3		251	288.6		mg/Kg		107	90 - 110	

Lab Sample ID: 890-2765-A-11-C MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 33396

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Added Result Qualifier Analyte %Rec Limits RPD Limit Unit D 251 Chloride 20.3 290.8 108 90 - 110 mg/Kg

**Eurofins Carlsbad** 

**Prep Type: Soluble** 

#### **QC Association Summary**

Client: Ensolum Project/Site: Pierce Canyon 28 Battery Job ID: 890-2772-1

SDG: 03E1558094

#### **GC VOA**

#### Prep Batch: 32857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2772-1	BH03	Total/NA	Solid	5035	
890-2772-2	BH03A	Total/NA	Solid	5035	
MB 880-32857/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32857/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32857/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2771-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2771-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Prep Batch: 33026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-33026/5-A	Method Blank	Total/NA	Solid	5035	

#### **Analysis Batch: 33138**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2772-1	BH03	Total/NA	Solid	8021B	32857
890-2772-2	BH03A	Total/NA	Solid	8021B	32857
MB 880-32857/5-A	Method Blank	Total/NA	Solid	8021B	32857
MB 880-33026/5-A	Method Blank	Total/NA	Solid	8021B	33026
LCS 880-32857/1-A	Lab Control Sample	Total/NA	Solid	8021B	32857
LCSD 880-32857/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32857
890-2771-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	32857
890-2771-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	32857

#### Analysis Batch: 33248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2772-1	BH03	Total/NA	Solid	Total BTEX	
890-2772-2	ВН03А	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

#### Analysis Batch: 32464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2772-1	BH03	Total/NA	Solid	8015B NM	32517
890-2772-2	BH03A	Total/NA	Solid	8015B NM	32517
MB 880-32517/1-A	Method Blank	Total/NA	Solid	8015B NM	32517
LCS 880-32517/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	32517
LCSD 880-32517/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	32517
890-2762-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	32517
890-2762-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	32517

#### Prep Batch: 32517

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2772-1	BH03	Total/NA	Solid	8015NM Prep	
890-2772-2	BH03A	Total/NA	Solid	8015NM Prep	
MB 880-32517/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-32517/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-32517/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2762-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2762-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

## **QC Association Summary**

Client: Ensolum

Job ID: 890-2772-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

GC Semi VOA

Analysis Batch: 32660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2772-1	BH03	Total/NA	Solid	8015 NM	
890-2772-2	ВН03А	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 32574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2772-1	BH03	Soluble	Solid	DI Leach	
890-2772-2	BH03A	Soluble	Solid	DI Leach	
MB 880-32574/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-32574/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-32574/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2765-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2765-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2772-1	BH03	Soluble	Solid	300.0	32574
890-2772-2	BH03A	Soluble	Solid	300.0	32574
MB 880-32574/1-A	Method Blank	Soluble	Solid	300.0	32574
LCS 880-32574/2-A	Lab Control Sample	Soluble	Solid	300.0	32574
LCSD 880-32574/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	32574
890-2765-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	32574
890-2765-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	32574

Client: Ensolum Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2772-1

SDG: 03E1558094

**Client Sample ID: BH03** 

Date Collected: 08/16/22 10:15 Date Received: 08/17/22 16:13 Lab Sample ID: 890-2772-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	32857	08/24/22 15:15	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33138	08/29/22 05:09	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33248	08/29/22 15:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			32660	08/22/22 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	32517	08/19/22 13:54	DM	EET MID
Total/NA	Analysis	8015B NM		1			32464	08/20/22 00:31	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	32574	08/21/22 17:07	SMC	EET MID
Soluble	Analysis	300.0		1	0 mL	0 mL	33396	08/31/22 16:53	CH	EET MID

Lab Sample ID: 890-2772-2

Matrix: Solid

Date Collected: 08/16/22 10:20 Date Received: 08/17/22 16:13

Client Sample ID: BH03A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	32857	08/24/22 15:15	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33138	08/29/22 05:30	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33248	08/29/22 15:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			32660	08/22/22 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32517	08/19/22 13:54	DM	EET MID
Total/NA	Analysis	8015B NM		1			32464	08/20/22 00:53	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	32574	08/21/22 17:07	SMC	EET MID
Soluble	Analysis	300.0		1	0 mL	0 mL	33396	08/31/22 17:00	CH	EET MID

**Laboratory References:** 

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

Released to Imaging: 12/14/2022 4:21:05 PM

## **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-2772-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

**Laboratory: Eurofins Midland** 

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, bu	ıt the laboratorv is not certifi	ied by the governing authority. This list ma	av include analvtes fo
• ,	•	it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes fo
the agency does not of	fer certification.	•	, , ,	ay include analytes fo
• ,	•	it the laboratory is not certifi Matrix	ied by the governing authority. This list ma	ay include analytes fo
the agency does not of	fer certification.	•	, , ,	ay include analytes fo

#### **Method Summary**

Client: Ensolum

Method

8021B

Total BTEX

8015 NM

8015B NM

8015NM Prep

DI Leach

300.0

5035

Project/Site: Pierce Canyon 28 Battery

**Method Description** 

**Total BTEX Calculation** 

Microextraction

Volatile Organic Compounds (GC)

Diesel Range Organics (DRO) (GC)

Diesel Range Organics (DRO) (GC)

**Deionized Water Leaching Procedure** 

Anions, Ion Chromatography

Closed System Purge and Trap

Job ID: 890-2772-1

SDG: 03E1558094

Protocol	Laboratory
SW846	EET MID
TAL SOP	EET MID
SW846	EET MID
SW846	EET MID
MCAWW	EET MID

**EET MID** 

EET MID

**EET MID** 

SW846

SW846

ASTM

**Protocol References:** 

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

#### **Sample Summary**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2772-1

SDG: 03E1558094

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2772-1	BH03	Solid	08/16/22 10:15	08/17/22 16:13	0.5
890-2772-2	BH03A	Solid	08/16/22 10:20	08/17/22 16:13	1

Total 200.7 / 6010

200.8 / 6020:

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se

Ag SiO<sub>2</sub> Na Sr Tl Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471

Incident ID:NAPP2218642544

13 14

eurofins Environment Testing

# Chain of Custody

EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Widland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Work Order No:

ANALYSIS REQUEST Preservative Codes	ANALYS	Turn Around
Deliverables: EDD [ ] Abar   [ ] Oniei:	com	mail: bbelill@ensolum.con
Reporting: Level III Level III Level IV	Carlsbad, NM 88220	City, State ZIP:
State of Project:	3104 E. Green Street	Address:
Program: UST/PST  PRP  Brownfields  RRC  Superfund	XTO Energy, Inc.	Company Name: XTO Energy, Inc.
Work Order Comments	Garrett Green	Bill to: (if different) Garrett Green
www.xenco.com Page 1 of 1	Tidubs, INN (ard) odenove, odnove, Inn (ard) odenove,	1000s, N

200000000000000000000000000000000000000		6			
				0 0	
		3	8/17/22 161	my retroval stat 18/17/20 16/18	1 my ra
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relingdished by: (Signature)
		writer, but the ministers to the second section to the	sanipre suprintied to Furding	Eurojins Aenoo Aminimum chaige of xiguw will be applied to each project and a charge of as not each sensor submitted to continue without some of the continue will be a continued to continue without some of the continue will be a continued to continue without some of the continued to continue will be a continued to continue without some of the continued to continue with the continued to continue without some of the continued to continued to conti	urorins Xenco minimum charge of kes.00 w
	e enforced unless previously negotiated.	nourred by the client if such losses are due to circurate his not analyzed. These terms will be enforced	ty for any losses or expenses in	service. Eurofins Xenco will be liable only for the cost of samples and sall not assume any responsibility for any bosses or expenses incurred by the citent if such losses are due to the cost of samples and sall not assume the citent in such as the citent in such	service. Eurofins Xenco will be liable only for the
	andard terms and conditions	ico, its affiliates and subcontractors. It assigns st	client company to Eurofins Xen	stice: 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	ce: Signature of this document and relinquish
7470 / 7471	<sub>3</sub> TI U Hg: 1631 / 245.1 / 7470 / 7471	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U	CRA Sb As Ba Be C	nalyzed TCLP / SPLP 6010: 8F	ircle Method(s) and Metal(s) to be analyzed

NaOH+Ascorbic Acid: SAPC

Sample Comments

Cost Center: 1081071001

Zn Acetate+NaOH: Zn Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>: NaSO<sub>3</sub> NaHSO<sub>4</sub>: NABIS H3PO4: HP

SAMPLE RECEIPT

Sampler's Name:

roject Location:

EDDY COUNTY, NM

Due Date:

☑ Routine

Rush

Pres. Code

Cool: Cool

MeOH: Me HNO<sub>3</sub>: HN NaOH: Na

None: NO

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

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

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

Kase Parker

Project Number:

roject Name:

Pierce Canyon 28 Battery

03E1558094

Samples Received Intact:

Cooler Custody Seals:

Yes No (NIA

Correction Factor: Thermometer ID:

Ö

CHLORIDES (EPA: 300.0)

890-2772 Chain of Custody

Temperature Reading:

Corrected Temperature

Yes Temp Blank:

Z

CON COM

Wet Ice:

N<sub>O</sub>

**Parameters** 

ample Custody Seals:

Yes

No

Sample Identification

Matrix

Sampled

Sampled

Date

Time

Grab/

# 0

TPH (8015) BTEX (8021

Cont

вноза BH 03

SS

8/16/2022 8/16/2022

1016

Grab/ Comp

1020

--<u>ი</u> Depth

Grab/

Phone:

9898540852 Carlsbad, NM 88220 3122 National parks Hwy

Email: bbelill

ity, State ZIP: dress Project Manager:

Company Name:

Ensolum, LLC Ben Belill

#### **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2772-1 SDG Number: 03E1558094

Login Number: 2772 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

#### **Login Sample Receipt Checklist**

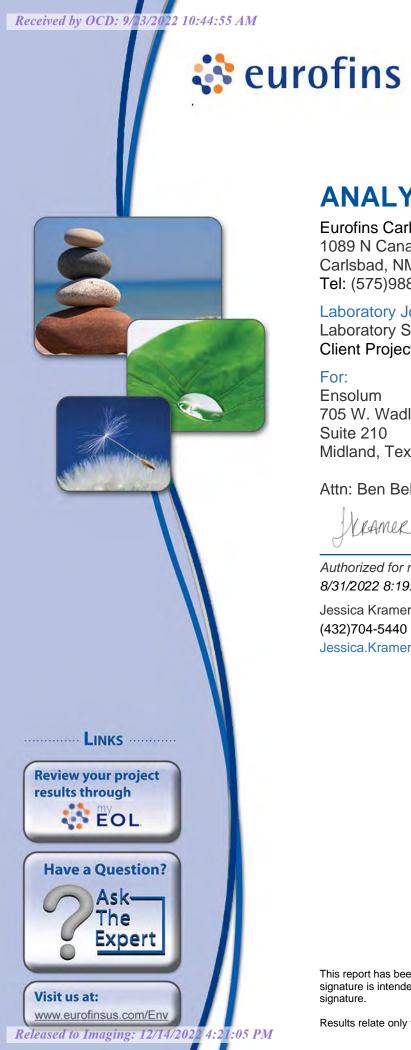
Client: Ensolum Job Number: 890-2772-1 SDG Number: 03E1558094

Login Number: 2772 **List Source: Eurofins Midland** List Number: 2 List Creation: 08/19/22 10:36 AM

Creator: Rodriguez, Leticia

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

<6mm (1/4").



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2773-1

Laboratory Sample Delivery Group: 03E1558094 Client Project/Site: Pierce Canyon 28 Battery

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/31/2022 8:19:08 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum Project/Site: Pierce Canyon 28 Battery Laboratory Job ID: 890-2773-1 SDG: 03E1558094

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#### **Definitions/Glossary**

Job ID: 890-2773-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

#### **Qualifiers**

**GC VOA** Qualifier

F1 MS and/or MSD recovery exceeds control limits.

**Qualifier Description** F2 MS/MSD RPD exceeds control limits

Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** \*1

LCS/LCSD RPD exceeds control limits. F1 MS and/or MSD recovery exceeds control limits.

F2 MS/MSD RPD exceeds control limits

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

HPLC/IC

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**Glossary** 

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

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

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor** 

Detection Limit (DoD/DOE) DL

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

DLC Decision Level Concentration (Radiochemistry)

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

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit **PQL** 

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

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

**TNTC** Too Numerous To Count

#### Case Narrative

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2773-1

SDG: 03E1558094

Job ID: 890-2773-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2773-1

#### Receipt

The samples were received on 8/17/2022 4:13 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 5.2°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-32857 and analytical batch 880-33138 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.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (890-2762-A-21-B), (890-2762-A-21-C MS) and (890-2762-A-21-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: BH04 (890-2773-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: BH04A (890-2773-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: The method blank for preparation batch 880-32517 and analytical batch 880-32464 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-32517 and analytical batch 880-32464 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-32517 and analytical batch 880-32464 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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

#### HPLC/IC

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

Job ID: 890-2773-1

Client: Ensolum Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

**Client Sample ID: BH04** 

Lab Sample ID: 890-2773-1

Date Collected: 08/16/22 10:30 Matrix: Solid Date Received: 08/17/22 16:13

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/24/22 15:15	08/29/22 05:50	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/24/22 15:15	08/29/22 05:50	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/24/22 15:15	08/29/22 05:50	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/24/22 15:15	08/29/22 05:50	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/24/22 15:15	08/29/22 05:50	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/24/22 15:15	08/29/22 05:50	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130			08/24/22 15:15	08/29/22 05:50	1
1,4-Difluorobenzene (Surr)	99		70 - 130			08/24/22 15:15	08/29/22 05:50	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/29/22 15:04	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH -	<49.9	U	49.9	mg/Kg			08/22/22 13:19	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		08/19/22 13:54	08/20/22 01:14	1
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		08/19/22 13:54	08/20/22 01:14	1
C10-C28) OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/19/22 13:54	08/20/22 01:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	61	S1-	70 - 130			08/19/22 13:54	08/20/22 01:14	
o-Terphenyl	57	S1-	70 - 130			08/19/22 13:54	08/20/22 01:14	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: BH04A Lab Sample ID: 890-2773-2

Date Collected: 08/16/22 10:35 **Matrix: Solid** Date Received: 08/17/22 16:13

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		08/24/22 15:15	08/29/22 06:10	1
Toluene	<0.00202	U	0.00202	mg/Kg		08/24/22 15:15	08/29/22 06:10	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		08/24/22 15:15	08/29/22 06:10	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		08/24/22 15:15	08/29/22 06:10	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		08/24/22 15:15	08/29/22 06:10	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		08/24/22 15:15	08/29/22 06:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130			08/24/22 15:15	08/29/22 06:10	1
1,4-Difluorobenzene (Surr)	101		70 - 130			08/24/22 15:15	08/29/22 06:10	1

## **Client Sample Results**

Client: Ensolum Job ID: 890-2773-1
Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

Client Sample ID: BH04A

Date Collected: 08/16/22 10:35 Date Received: 08/17/22 16:13 Lab Sample ID: 890-2773-2

Matrix: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			08/29/22 15:04	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/22/22 13:19	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U *1	50.0	mg/Kg		08/19/22 13:54	08/20/22 01:58	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/20/22 01:58	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/20/22 01:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	49	S1-	70 - 130			08/19/22 13:54	08/20/22 01:58	1
o-Terphenyl	45	S1-	70 - 130			08/19/22 13:54	08/20/22 01:58	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.5	-	5.02	mg/Kg			08/31/22 17:14	1

## **Surrogate Summary**

Job ID: 890-2773-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

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)	
890-2771-A-1-C MS	Matrix Spike	86	108	
890-2771-A-1-D MSD	Matrix Spike Duplicate	94	102	
890-2773-1	BH04	91	99	
890-2773-2	BH04A	93	101	
LCS 880-32857/1-A	Lab Control Sample	101	96	
LCSD 880-32857/2-A	Lab Control Sample Dup	98	96	
MB 880-32857/5-A	Method Blank	84	114	
MB 880-33026/5-A	Method Blank	78	121	

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

_			
		1001	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2762-A-21-C MS	Matrix Spike	64 S1-	56 S1-
890-2762-A-21-D MSD	Matrix Spike Duplicate	70	60 S1-
890-2773-1	BH04	61 S1-	57 S1-
890-2773-2	BH04A	49 S1-	45 S1-
LCS 880-32517/2-A	Lab Control Sample	111	107
LCSD 880-32517/3-A	Lab Control Sample Dup	108	101
MB 880-32517/1-A	Method Blank	78	79

**Surrogate Legend** 

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2773-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-32857/5-A

**Matrix: Solid Analysis Batch: 33138**  Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 32857

	MR M	NB						
Analyte	Result C	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200 U	J	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	
Toluene	<0.00200 U	J	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	
Ethylbenzene	<0.00200 U	J	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	
m-Xylene & p-Xylene	<0.00400 U	J	0.00400	mg/Kg		08/24/22 15:15	08/29/22 04:00	
o-Xylene	<0.00200 U	J	0.00200	mg/Kg		08/24/22 15:15	08/29/22 04:00	
Xylenes, Total	<0.00400 U	J	0.00400	mg/Kg		08/24/22 15:15	08/29/22 04:00	

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130	 08/24/22 15:15	08/29/22 04:00	1
1,4-Difluorobenzene (Surr)	114		70 - 130	08/24/22 15:15	08/29/22 04:00	1

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 880-32857/1-A

Matrix: Solid

Analysis Batch: 33138

Prep Type: Total/NA Prep Batch: 32857

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09205	-	mg/Kg		92	70 - 130	
Toluene	0.100	0.1038		mg/Kg		104	70 - 130	
Ethylbenzene	0.100	0.1055		mg/Kg		105	70 - 130	
m-Xylene & p-Xylene	0.200	0.1968		mg/Kg		98	70 - 130	
o-Xylene	0.100	0.1045		mg/Kg		105	70 - 130	
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LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	101	70 - 130
1,4-Difluorobenzene (Surr)	96	70 - 130

Lab Sample ID: LCSD 880-32857/2-A

**Matrix: Solid** 

Analysis Batch: 33138

Client	Sample	ID: Lab	Control	Sample	Dup

Prep Type: Total/NA

Prep Batch: 32857

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.09149		mg/Kg		91	70 - 130	1	35	
Toluene	0.100	0.1010		mg/Kg		101	70 - 130	3	35	
Ethylbenzene	0.100	0.1023		mg/Kg		102	70 - 130	3	35	
m-Xylene & p-Xylene	0.200	0.1907		mg/Kg		95	70 - 130	3	35	
o-Xylene	0.100	0.1015		mg/Kg		102	70 - 130	3	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1.4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 890-2771-A-1-C MS

**Matrix: Solid** 

Analysis Batch: 33138

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

Prep Batch: 32857

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F2 F1	0.101	0.06187	F1	mg/Kg		62	70 - 130	
Toluene	<0.00200	U F2 F1	0.101	0.05727	F1	mg/Kg		57	70 - 130	

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Released to Imaging: 12/14/2022 4:21:05 PM

#### QC Sample Results

Client: Ensolum Job ID: 890-2773-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

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

Lab Sample ID: 890-2771-A-1-C MS

Lab Sample ID: 890-2771-A-1-D MSD

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 33138

Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 32857

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00200	U F2 F1	0.101	0.05818	F1	mg/Kg		58	70 - 130	
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.201	0.09724	F1	mg/Kg		48	70 - 130	
o-Xylene	<0.00200	U F2 F1	0.101	0.05296	F1	mg/Kg		53	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	86		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 32857

**Analysis Batch: 33138** MSD MSD Sample Sample Spike Result Qualifier Added Result Qualifier RPD Limit Analyte Unit %Rec Limits 0.0998 Benzene <0.00200 U F2 F1 0.09682 F2 mg/Kg 97 70 - 130 44 35 Toluene 0.0998 0.09590 F2 70 - 130 <0.00200 U F2 F1 mg/Kg 96 50 35 Ethylbenzene <0.00200 U F2 F1 0.0998 0.09225 F2 mg/Kg 92 70 - 130 45 35 <0.00401 U F2 F1 0.200 0.1688 F2 70 - 130 35 m-Xylene & p-Xylene mg/Kg 54 0.0998 <0.00200 U F2 F1 0.08965 F2 90 70 - 130 51 o-Xylene mg/Kg

MSD MSD

Surrogate	%Recovery Qualifi	er Limits
4-Bromofluorobenzene (Surr)	94	70 - 130
1,4-Difluorobenzene (Surr)	102	70 - 130

Lab Sample ID: MB 880-33026/5-A

**Matrix: Solid** 

Analysis Batch: 33138

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 33026

MB MB

- 1									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
١	Benzene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
١	Toluene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
	Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
ı	m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
	o-Xylene	<0.00200	U	0.00200	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
	Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/26/22 09:25	08/28/22 16:24	1
- 1									

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130	08/26/22 09:25	08/28/22 16:24	1
1,4-Difluorobenzene (Surr)	121		70 - 130	08/26/22 09:25	08/28/22 16:24	1

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

Lab Sample ID: MB 880-32517/1-A

**Matrix: Solid** 

Analysis Batch: 32464

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 32517

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/19/22 20:12	1

(GRO)-C6-C10

#### **QC Sample Results**

Client: Ensolum Job ID: 890-2773-1
Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

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

Lab Sample ID: MB 880-32517/1-A

Matrix: Solid

Analysis Batch: 32464

MB MB

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32517

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg	_	08/19/22 13:54	08/19/22 20:12	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/19/22 20:12	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130			08/19/22 13:54	08/19/22 20:12	1
o-Terphenyl	79		70 - 130			08/19/22 13:54	08/19/22 20:12	1

Lab Sample ID: LCS 880-32	517/2-A						Client	Sample	D: Lab Contr	•
Matrix: Solid									Prep Type	
Analysis Batch: 32464									Prep Ba	tch: 32517
			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics			1000	1106		mg/Kg		111	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over			1000	984.6		mg/Kg		98	70 - 130	
C10-C28)										
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane			70 - 130							
o-Terphenyl	107		70 - 130							

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 32464 Prep Batch: 32517 Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits RPD Limit D Gasoline Range Organics 1000 891.6 \*1 mg/Kg 89 70 - 130 21 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 963.8 mg/Kg 96 70 - 130 2 20 C10-C28)

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-2762-A-21 Matrix: Solid Analysis Batch: 32464	C MS							Client		Matrix Spike pe: Total/NA satch: 32517
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 F1 F2	999	468.5	F1	mg/Kg		45	70 - 130	
Diesel Range Organics (Over C10-C28)	78.2	F1	999	515.8	F1	mg/Kg		44	70 - 130	
	MS	MS								

 Surrogate
 %Recovery
 Qualifier
 Limits

 1-Chlorooctane
 64
 S1 70 - 130

 o-Terphenyl
 56
 S1 70 - 130

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Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 880-32517/3-A

Job ID: 890-2773-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

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

Lab Sample ID: 890-2762-A-21-D MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** Analysis Batch: 32464 Prep Type: Total/NA Prep Batch: 32517

Client Sample ID: Lab Control Sample Dup

**Prep Type: Soluble** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Sample Sample MSD MSD RPD Spike Result Qualifier Analyte Added Result Qualifier %Rec Limits RPD Limit Unit D Gasoline Range Organics <49.9 U\*1F1 998 954.8 F2 mg/Kg 94 70 - 130 68 20 (GRO)-C6-C10 F2 78.2 F1 998 576.5 F1 50 70 - 130 Diesel Range Organics (Over mg/Kg 11 20

C10-C28)

MSD MSD

%Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 70 o-Terphenyl 60 S1-70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-32574/1-A Client Sample ID: Method Blank **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 33396** 

MB MB

Result Qualifier RL Unit Analyte Prepared Analyzed Dil Fac Chloride <5.00 5.00 mg/Kg 08/31/22 13:40

Lab Sample ID: LCS 880-32574/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 33396** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 250.7 90 - 110 mg/Kg 100

Lab Sample ID: LCSD 880-32574/3-A

**Matrix: Solid** 

Analysis Batch: 33396

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	251.0		mg/Kg	_	100	90 - 110	0	20	

Lab Sample ID: 890-2765-A-11-B MS

**Matrix: Solid** 

**Analysis Batch: 33396** 

Sample Sample Spike MS MS %Rec Qualifier Added Qualifier Analyte Result Result Unit %Rec Limits Chloride 251 107 90 - 110 20.3 288.6 mg/Kg

Lab Sample ID: 890-2765-A-11-C MSD

Matrix: Solid

Analysis Ratch: 33396

Alialysis Balcii. 33336											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	20.3		251	290.8		mg/Kg		108	90 - 110	1	20

#### **QC Association Summary**

Client: Ensolum Project/Site: Pierce Canyon 28 Battery Job ID: 890-2773-1 SDG: 03E1558094

#### **GC VOA**

#### Prep Batch: 32857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2773-1	BH04	Total/NA	Solid	5035	
890-2773-2	BH04A	Total/NA	Solid	5035	
MB 880-32857/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32857/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32857/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2771-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2771-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Prep Batch: 33026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-33026/5-A	Method Blank	Total/NA	Solid	5035	

#### Analysis Batch: 33138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2773-1	BH04	Total/NA	Solid	8021B	32857
890-2773-2	BH04A	Total/NA	Solid	8021B	32857
MB 880-32857/5-A	Method Blank	Total/NA	Solid	8021B	32857
MB 880-33026/5-A	Method Blank	Total/NA	Solid	8021B	33026
LCS 880-32857/1-A	Lab Control Sample	Total/NA	Solid	8021B	32857
LCSD 880-32857/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32857
890-2771-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	32857
890-2771-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	32857

#### Analysis Batch: 33249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2773-1	BH04	Total/NA	Solid	Total BTEX	
890-2773-2	BH04A	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

#### Analysis Batch: 32464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2773-1	BH04	Total/NA	Solid	8015B NM	32517
890-2773-2	BH04A	Total/NA	Solid	8015B NM	32517
MB 880-32517/1-A	Method Blank	Total/NA	Solid	8015B NM	32517
LCS 880-32517/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	32517
LCSD 880-32517/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	32517
890-2762-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	32517
890-2762-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	32517

#### Prep Batch: 32517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2773-1	BH04	Total/NA	Solid	8015NM Prep	
890-2773-2	BH04A	Total/NA	Solid	8015NM Prep	
MB 880-32517/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-32517/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-32517/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2762-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2762-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

## **QC Association Summary**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2773-1 SDG: 03E1558094

#### GC Semi VOA

#### Analysis Batch: 32661

	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
	890-2773-1	BH04	Total/NA	Solid	8015 NM	
Į	890-2773-2	BH04A	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 32574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2773-1	BH04	Soluble	Solid	DI Leach	_
890-2773-2	BH04A	Soluble	Solid	DI Leach	
MB 880-32574/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-32574/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-32574/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2765-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2765-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 33396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2773-1	BH04	Soluble	Solid	300.0	32574
890-2773-2	BH04A	Soluble	Solid	300.0	32574
MB 880-32574/1-A	Method Blank	Soluble	Solid	300.0	32574
LCS 880-32574/2-A	Lab Control Sample	Soluble	Solid	300.0	32574
LCSD 880-32574/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	32574
890-2765-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	32574
890-2765-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	32574

Client: Ensolum

Job ID: 890-2773-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

Lab Sample ID: 890-2773-1

**Client Sample ID: BH04** Date Collected: 08/16/22 10:30 Date Received: 08/17/22 16:13

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	32857	08/24/22 15:15	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33138	08/29/22 05:50	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33249	08/29/22 15:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			32661	08/22/22 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	32517	08/19/22 13:54	DM	EET MID
Total/NA	Analysis	8015B NM		1			32464	08/20/22 01:14	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	32574	08/21/22 17:07	SMC	EET MID
Soluble	Analysis	300.0		1	0 mL	0 mL	33396	08/31/22 17:07	CH	EET MID

Lab Sample ID: 890-2773-2

Matrix: Solid

Date Collected: 08/16/22 10:35 Date Received: 08/17/22 16:13

Client Sample ID: BH04A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	32857	08/24/22 15:15	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33138	08/29/22 06:10	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33249	08/29/22 15:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			32661	08/22/22 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32517	08/19/22 13:54	DM	EET MID
Total/NA	Analysis	8015B NM		1			32464	08/20/22 01:58	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	32574	08/21/22 17:07	SMC	EET MID
Soluble	Analysis	300.0		1	0 mL	0 mL	33396	08/31/22 17:14	CH	EET MID

**Laboratory References:** 

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

## **Accreditation/Certification Summary**

Client: Ensolum
Project/Site: Pierce Canyon 28 Battery
SDG: 03E1558094

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

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

Authority	Pr	ogram	Identification Number	<b>Expiration Date</b>
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report hi	it the laboratory is not certific	ed by the governing authority. This list ma	v include analytes for
the agency does not of	· '	it the laboratory is not certain	ed by the governing additionty. This list his	ay include analytes for
0 ,	· '	Matrix	Analyte	ay include analytes for
the agency does not of	fer certification.	,	, , ,	

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#### **Method Summary**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2773-1

SDG: 03E1558094

/lethod	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
Ol Leach	Deionized Water Leaching Procedure	ASTM	EET MID

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

#### **Sample Summary**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2773-1

SDG: 03E1558094

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-2773-1	BH04	Solid	08/16/22 10:30	08/17/22 16:13
890-2773-2	BH04A	Solid	08/16/22 10:35	08/17/22 16:13

13

# Chain of Custody

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

Environment Testing

Xenco

Project Manager: Company Name:

3122 National parks Hwy

Ben Belill Ensolum, LLC

Bill to: (if different)
Company Name:

Garrett Green

XTO Energy, Inc.

3104 E. Green Street

9-3334	AACIN CLUGGI INC.
-1296	
-3199	
	www.xenco.com Page 1_of 1_
	Work Order Comments
	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
	State of Project:
	Reporting: Level II   Level III   PST/UST   TRRP   Level IV
	Deliverables: EDD ADaPT Other:

City, State ZIP: C	Carlsbad, NM 88220		0	City, State ZIP:		Carlsbad, NM 88220	ad, N	A 8822	°				ㅗ	ייור כ	Nelsoning: EDD	י ק	j : [	<u>ا</u> و	: ]	ADaPT []	⊐ §	] : Ç	Other	[		
Phone: 19	9898540852		Email: b	Email: bbelili@ensolum.com	im.cor						II		L					ااا				$\  \ $				
Project Name:	Pierce Canyon 28 Battery	Battery	Turn Around	round							ANALYSIS	YSIS	REQ	REQUEST	1		1	$\cdot$	-		_	rese	rvat	ive C	Preservative Codes	3,
Project Number:	03E1558094		✓ Routine	Rush	Pres. Code											1		-	_		None: NO	O		DΙV	DI Water: H <sub>2</sub> O	H <sub>2</sub> C
Project Location:	EDDY COUNTY, NM		Due Date:															_			Cool: Cool	C00		MeC	MeOH: Me	O
Sampler's Name:	Kase Parker		TAT starts the day received by	ay received by																	HCL: HC	H		IN.	HNO3: HN	2
PO#:			the lab, if received by 4:30pm	red by 4:30pm	rs										-	-	-	-	_		H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub>	H <sub>2</sub>		NaC	NaOH: Na	m
SAMPLE RECEIPT	Temp Blank:	(Yè) No	Wet Ice:	(V) No	nete	.0)					Ē	ŧ									н₃РО₄∶ НР	∓. H				
Samples Received Intact:		Thermometer ID:	+	700-MV	ran	300															NaHS	NaHSO₄: NABIS	ABIS			
Cooler Custody Seals:	Yes No	NVA Correction Factor:		0	Pa	PA:				_											Na <sub>2</sub> S <sub>2</sub>	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>	aSO <sub>3</sub>			
Sample Custody Seals:	Yes No	Temperature Reading:	eading	7.2		S (EI				ደ ≡							_				Zn Ac	Zn Acetate+NaOH: Zn	NaO	H: Zn		
Total Containers:		Corrected Temperature	perature:	5.2		DES	15)	021		ç	090-2770 0119	0	9	m or Custody	y						NaOH	+Asc	orbic	Acid:	NaOH+Ascorbic Acid: SAPC	O
Sample Identification	fication Matrix	Date	Time [	Depth Grab/	C # of	HLOR	PH (80	STEX (8														Samp	yle C	omn	Sample Comments	·
BH04	S	2+		0.5' Grab/	_	×	×	×								Н	Н	Н			5	÷	nter.	1081	Cost Center: 1081071001	<u> </u>
ВН04А		8/16/2022	1035 1	Grab/	1	×	×	×							Г		-	┝	-	L						
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										Ш						++	+	++-	++		Incide	ž	NA.	— ЭР22	Incident ID:NAPP2218642544	254
															$\top$	$\top$	++	$\dashv$	+							
Total 200.7 / 6010	0 200.8 / 6020:	8R	8RCRA 13PPI	13PPM Texas 11	Al Sb	b As	As Ba E	Ве В	Со Са	Cr	C0 C	Cu Fe	공	ν	Mg Mn Mo Ni K Se	Z	S	> I	Ag SiO <sub>2</sub> Na Sr	Na		TI Sn U V Zn	C	7		
Circle Method(s) and Metal(s) to be analyzed	Metal(s) to be analya	zed	TCLP / SPI	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn	CRA	Sb A	s Ba	Be C	C G	င္ပ	u Pb	₹	So	Se	Mo Ni Se Ag Ti∪			₩.	g 16	31/	245.1	Hg: 1631 / 245.1 / /4/U	)  -	//4/1		
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its attiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	his document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontract (enco 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 loss minimum charge of \$6 for each papelled to each project and a charge of \$6 for each sample submitted to Eurofins Xenco, but not analyzed. These to	of samples constit at of samples and a applied to each pr	utes a valid purc shall not assume oject and a char	hase order from any responsibili se of \$5 for each	client co ty for an sample	ompany y iosses submitte	to Eurof or expe d to Eu	ins Xen enses in rofins X	co, Its at curred t enco, bu	fillates y the cl	and sub ient if s alyzed.	contra uch los These	ctors, the ses are serms w	assigr due to	tors. It assigns standard terms and conditions es are due to circumstances beyond the control erms will be enforced unless previously negotiated.	dard to	s beyo s previ	nd con nd the ously	itions contro egotia	ted.						
Relinquished by: (Signature)	(Signature)	Received	Received by: (Signature)	re)		Date/Time	Time		Re	Relinquished by: (Sig	hed t	y: (Si	gnature)	ē)		Re	Received by: (Signature)	d by:	(Sig	natur	9			Date/Time	Time	
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#### **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2773-1

SDG Number: 03E1558094

Login Number: 2773 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

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#### **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2773-1 SDG Number: 03E1558094

List Source: Eurofins Midland

List Number: 2 Creator: Rodriguez, Leticia

Login Number: 2773

List Source: Eurofins Midland List Creation: 08/19/22 10:36 AM

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

**Eurofins Carlsbad** 

Released to Imaging: 12/14/2022 4:21:05 PM

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Released to Imaging: 12/14/2022 4:21:05 PM

**Environment Testing America** 

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2774-1

Laboratory Sample Delivery Group: 03E1558094 Client Project/Site: Pierce Canyon 28 Battery

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/29/2022 1:03:48 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum Project/Site: Pierce Canyon 28 Battery Laboratory Job ID: 890-2774-1 SDG: 03E1558094

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# **Definitions/Glossary**

Client: Ensolum Job ID: 890-2774-1 Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

#### **Qualifiers**

#### **GC VOA**

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

**GC Semi VOA** 

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

#### **HPLC/IC**

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

#### **Glossary**

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
Percent Recovery
Contains Free Liquid
Colony Forming Unit
Contains No Free Liquid
Duplicate Error Ratio (normalized absolute difference)
Dilution Factor
Detection Limit (DoD/DOE)
Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
Decision Level Concentration (Radiochemistry)

EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"

MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit

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

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	Polativo Error Patio

RER	Relative Error Ratio (Radiochemistry)
RER	Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

**Eurofins Carlsbad** 

#### Case Narrative

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2774-1

SDG: 03E1558094

Job ID: 890-2774-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2774-1

#### Receipt

The samples were received on 8/17/2022 4:13 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 5.2°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-32855 and analytical batch 880-33040 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.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (890-2762-A-21-B), (890-2762-A-21-C MS) and (890-2762-A-21-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following samples were outside control limits: BH01 (890-2774-1), BH01A (890-2774-2) and BH01B (890-2774-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: The method blank for preparation batch 880-32517 and analytical batch 880-32464 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-32517 and analytical batch 880-32464 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-32517 and analytical batch 880-32464 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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

#### HPLC/IC

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-32575 and analytical batch 880-32882 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits. The associated samples are: (880-18347-A-5-A), (880-18347-A-5-B MS) and (880-18347-A-5-C MSD).

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

Matrix: Solid

Lab Sample ID: 890-2774-1

Job ID: 890-2774-1

Client: Ensolum Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

**Client Sample ID: BH01** Date Collected: 08/16/22 09:50 Date Received: 08/17/22 16:13

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/22 14:35	08/27/22 13:47	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/22 14:35	08/27/22 13:47	1
Ethylbenzene	<0.00200	U F1	0.00200	mg/Kg		08/24/22 14:35	08/27/22 13:47	1
m-Xylene & p-Xylene	<0.00401	U F1	0.00401	mg/Kg		08/24/22 14:35	08/27/22 13:47	1
o-Xylene	<0.00200	U F1	0.00200	mg/Kg		08/24/22 14:35	08/27/22 13:47	1
Xylenes, Total	<0.00401	U F1	0.00401	mg/Kg		08/24/22 14:35	08/27/22 13:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130			08/24/22 14:35	08/27/22 13:47	1
1,4-Difluorobenzene (Surr)	108		70 - 130			08/24/22 14:35	08/27/22 13:47	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			08/29/22 12:44	1
Analyte Total TPH	Result 180	Qualifier	RL 49.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 08/22/22 13:19	Dil Fac
-	100			9,9				1
							00/22/22 13.19	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)					00/22/22 13.19	1
Method: 8015B NM - Diesel Rang Analyte		RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	1 Dil Fac
		Qualifier	<b>RL</b> 49.9	<mark>Unit</mark> mg/Kg	<u>D</u>	Prepared 08/19/22 13:54		
Analyte Gasoline Range Organics	Result	Qualifier			<u>D</u>	<u>·</u>	Analyzed	Dil Fac
Analyte  Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over	Result   <49.9	Qualifier U *1	49.9	mg/Kg	<u>D</u>	08/19/22 13:54	<b>Analyzed</b> 08/20/22 02:19	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result   <49.9	Qualifier U *1	49.9	mg/Kg	<u>D</u>	08/19/22 13:54 08/19/22 13:54	Analyzed 08/20/22 02:19 08/20/22 02:19	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <49.9   180   <49.9	Qualifier U *1	49.9 49.9 49.9	mg/Kg	<u> </u>	08/19/22 13:54 08/19/22 13:54 08/19/22 13:54	Analyzed 08/20/22 02:19 08/20/22 02:19 08/20/22 02:19	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	Result	Qualifier U *1  U Qualifier	49.9 49.9 49.9 <b>Limits</b>	mg/Kg	<u> </u>	08/19/22 13:54 08/19/22 13:54 08/19/22 13:54  Prepared	Analyzed 08/20/22 02:19 08/20/22 02:19 08/20/22 02:19 Analyzed	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result	Qualifier U *1  U  Qualifier  S1-	49.9 49.9 49.9 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	08/19/22 13:54  08/19/22 13:54  08/19/22 13:54  Prepared  08/19/22 13:54	Analyzed 08/20/22 02:19 08/20/22 02:19 08/20/22 02:19 Analyzed 08/20/22 02:19	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U *1  U  Qualifier  S1-	49.9 49.9 49.9 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	08/19/22 13:54  08/19/22 13:54  08/19/22 13:54  Prepared  08/19/22 13:54	Analyzed 08/20/22 02:19 08/20/22 02:19 08/20/22 02:19 Analyzed 08/20/22 02:19	Dil Fac

**Client Sample ID: BH01A** Lab Sample ID: 890-2774-2

Date Collected: 08/16/22 09:55 Date Received: 08/17/22 16:13

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/24/22 14:35	08/27/22 14:08	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/24/22 14:35	08/27/22 14:08	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/24/22 14:35	08/27/22 14:08	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/24/22 14:35	08/27/22 14:08	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/24/22 14:35	08/27/22 14:08	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/24/22 14:35	08/27/22 14:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130			08/24/22 14:35	08/27/22 14:08	

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**Matrix: Solid** 

Matrix: Solid

Lab Sample ID: 890-2774-2

# **Client Sample Results**

Client: Ensolum Job ID: 890-2774-1
Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

Client Sample ID: BH01A

Date Collected: 08/16/22 09:55 Date Received: 08/17/22 16:13

Sample Depth: 1

Method: 8021B - Volati	le Organic Comp	ounds (GC)	(Continued)
modifical coaling foliati	io organio comp	, o a a o , o o ,	( Continuou,

Surrogate	%Recovery (	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	106		70 - 130	08/24/22 14:35	08/27/22 14:08	1

N 0 - 41 1 -	T - 4 - 1	DTEV	T-4-1	DTEV	0-11-41
wetnoa:	iotai	RIFY -	- Iotai	RIFY	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/29/22 12:44	1

Method: 8015 NM - Diesel	Dange Organice		
i welliou, ou la min - Diesei	Range Organics	ונטאטו	901

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			08/22/22 13:19	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U *1	49.9	mg/Kg		08/19/22 13:54	08/20/22 02:41	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		08/19/22 13:54	08/20/22 02:41	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/19/22 13:54	08/20/22 02:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	64	S1-	70 - 130	08/19/22 13:54	08/20/22 02:41	1
o-Terphenyl	64	S1-	70 - 130	08/19/22 13:54	08/20/22 02:41	1

Method: 300.0	) - Anions, Io	n Chromatograp	hy - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	91.5	4.98	mg/Kg			08/25/22 09:27	1

Client Sample ID: BH01B

Date Collected: 08/16/22 10:00

Lab Sample ID: 890-2774-3

Matrix: Solid

Date Collected: 08/16/22 10:00 Date Received: 08/17/22 16:13

Sample Depth: 2

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

mounda. our ib volutile orga	ino compoundo (	(33)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/22 14:35	08/27/22 14:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/22 14:35	08/27/22 14:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/22 14:35	08/27/22 14:28	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		08/24/22 14:35	08/27/22 14:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/22 14:35	08/27/22 14:28	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		08/24/22 14:35	08/27/22 14:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130			08/24/22 14:35	08/27/22 14:28	1
1,4-Difluorobenzene (Surr)	107		70 - 130			08/24/22 14:35	08/27/22 14:28	1

Mothod:	Total RT	EY Tota	I DTEY	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00399	U	0.00399	ma/Ka			08/29/22 12:44	1

	Method: 8015 NM - Diesel	Range Organics (DRO	D) (GC)	١
ı	Michiga. 00 to Min - Diese	i italige Organics (Ditt		,

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/22/22 13:19	1

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Matrix: Solid

Lab Sample ID: 890-2774-3

# **Client Sample Results**

Client: Ensolum Job ID: 890-2774-1
Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

Client Sample ID: BH01B

Date Collected: 08/16/22 10:00 Date Received: 08/17/22 16:13

Sample Depth: 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U *1	50.0	mg/Kg		08/19/22 13:54	08/20/22 03:03	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/20/22 03:03	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/19/22 13:54	08/20/22 03:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	58	S1-	70 - 130			08/19/22 13:54	08/20/22 03:03	1
o-Terphenyl	57	S1-	70 - 130			08/19/22 13:54	08/20/22 03:03	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	81.1		4.99	mg/Kg			08/25/22 09:34	

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# **Surrogate Summary**

Client: Ensolum
Project/Site: Pierce Canyon 28 Battery

SDG: 03E1558094

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)	
390-2774-1	BH01	91	108	
890-2774-1 MS	BH01	92	101	
890-2774-1 MSD	BH01	91	109	
390-2774-2	BH01A	87	106	
390-2774-3	BH01B	90	107	
LCS 880-32855/1-A	Lab Control Sample	88	104	
_CSD 880-32855/2-A	Lab Control Sample Dup	93	100	
MB 880-32705/5-B	Method Blank	80	118	
MB 880-32855/5-A	Method Blank	78	123	
Surrogate Legend				

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2762-A-21-C MS	Matrix Spike	64 S1-	56 S1-	
890-2762-A-21-D MSD	Matrix Spike Duplicate	70	60 S1-	
890-2774-1	BH01	70	69 S1-	
890-2774-2	BH01A	64 S1-	64 S1-	
890-2774-3	BH01B	58 S1-	57 S1-	
LCS 880-32517/2-A	Lab Control Sample	111	107	
LCSD 880-32517/3-A	Lab Control Sample Dup	108	101	
MB 880-32517/1-A	Method Blank	78	79	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Ensolum Job ID: 890-2774-1 Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-32705/5-B

**Matrix: Solid** Analysis Batch: 33040 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 32705

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	МВ	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		08/22/22 15:07	08/27/22 01:22	
Toluene	<0.00200	U	0.00200	mg/Kg		08/22/22 15:07	08/27/22 01:22	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/22/22 15:07	08/27/22 01:22	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/22/22 15:07	08/27/22 01:22	
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/22/22 15:07	08/27/22 01:22	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/22/22 15:07	08/27/22 01:22	

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		70 - 130	08/22/22 15:07	08/27/22 01:22	1
1,4-Difluorobenzene (Surr)	118		70 - 130	08/22/22 15:07	08/27/22 01:22	1

Lab Sample ID: MB 880-32855/5-A

Client Sample ID: Method Blank

Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 33040	Prep Batch: 32855
мв мв	

Analyte	Result Qu	ialifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200 U	0.00200	mg/Kg		08/24/22 14:35	08/27/22 13:18	1
Toluene	<0.00200 U	0.00200	mg/Kg		08/24/22 14:35	08/27/22 13:18	1
Ethylbenzene	<0.00200 U	0.00200	mg/Kg		08/24/22 14:35	08/27/22 13:18	1
m-Xylene & p-Xylene	<0.00400 U	0.00400	mg/Kg		08/24/22 14:35	08/27/22 13:18	1
o-Xylene	<0.00200 U	0.00200	mg/Kg		08/24/22 14:35	08/27/22 13:18	1
Xylenes, Total	<0.00400 U	0.00400	mg/Kg		08/24/22 14:35	08/27/22 13:18	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130	08/24/22 14:35	08/27/22 13:18	1
1,4-Difluorobenzene (Surr)	123		70 - 130	08/24/22 14:35	08/27/22 13:18	1

Lab Sample ID: LCS 880-32855/1-A

**Matrix: Solid** 

Analysis Batch: 33040

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 32855

%Rec
fier Unit D %Rec Limits
mg/Kg 105 70 - 130
mg/Kg 98 70 <sub>-</sub> 130
mg/Kg 91 70 - 130
mg/Kg 83 70 <sub>-</sub> 130
mg/Kg 89 70 - 130
it

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	88	70 - 130
1.4-Difluorobenzene (Surr)	104	70 - 130

Lab Sample ID: LCSD 880-32855/2-A

Matrix: Solid

Analysis Batch: 33040

Client Sample ID: Lal	b Control Sample Dup
	Dren Times Tetal/NIA

Prep Type: Total/NA

Prep Batch: 32855

	Spike	LCSD LCSD				%Rec		RPD	
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.09749	mg/Kg		97	70 - 130	8	35	

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## QC Sample Results

Client: Ensolum Job ID: 890-2774-1 SDG: 03E1558094 Project/Site: Pierce Canyon 28 Battery

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

Lab Sample ID: LCSD 880-32855/2-A **Matrix: Solid** 

Analysis Batch: 33040

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 32855

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.09902		mg/Kg		99	70 - 130	1	35
Ethylbenzene	0.100	0.09664		mg/Kg		97	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.1774		mg/Kg		89	70 - 130	6	35
o-Xylene	0.100	0.09451		mg/Kg		95	70 - 130	6	35

LCSD LCSD

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

Lab Sample ID: 890-2774-1 MS

**Matrix: Solid** 

Analysis Batch: 33040

**Client Sample ID: BH01** Prep Type: Total/NA

Prep Batch: 32855

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.100	0.1002		mg/Kg		100	70 - 130	
Toluene	<0.00200	U	0.100	0.08603		mg/Kg		86	70 - 130	
Ethylbenzene	<0.00200	U F1	0.100	0.06428	F1	mg/Kg		64	70 - 130	
m-Xylene & p-Xylene	<0.00401	U F1	0.201	0.09212	F1	mg/Kg		46	70 - 130	
o-Xylene	<0.00200	U F1	0.100	0.06101	F1	mg/Kg		61	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	92	70 - 130
1.4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: 890-2774-1 MSD

**Matrix: Solid** 

Analysis Batch: 33040

**Client Sample ID: BH01** 

Prep Type: Total/NA

Prep Batch: 32855

7 many one Battern ever re											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0998	0.1123		mg/Kg		113	70 - 130	11	35
Toluene	<0.00200	U	0.0998	0.09676		mg/Kg		97	70 - 130	12	35
Ethylbenzene	<0.00200	U F1	0.0998	0.07774		mg/Kg		78	70 - 130	19	35
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.1288	F1	mg/Kg		65	70 - 130	33	35
o-Xylene	<0.00200	U F1	0.0998	0.07397		mg/Kg		74	70 - 130	19	35

MSD MSD

мв мв Result Qualifier

<50.0 U

Surrogate	76Kecovery	Qualifier	LIIIIII
4-Bromofluorobenzene (Surr)	91		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

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

Lab Sample ID: MB 880-32517/1-A

**Matrix: Solid** 

Analysis Batch: 32464

Gasoline Range Organics

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

Prep Batch: 32517

Unit Prepared mg/Kg 08/19/22 13:54 08/19/22 20:12

(GRO)-C6-C10

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50.0

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Job ID: 890-2774-1 Client: Ensolum Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

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

Lab Sample ID: MB 880-32517/1-A **Matrix: Solid** 

Analysis Batch: 32464

Diesel Range Organics (Over

Analyte

Prep Type: Total/NA Prep Batch: 32517

> MB MB Result Qualifier RL Unit D Prepared Analyzed Dil Fac <50.0 U 50.0 08/19/22 13:54 08/19/22 20:12 mg/Kg

C10-C28) 50.0 08/19/22 13:54 08/19/22 20:12 Oll Range Organics (Over C28-C36) <50.0 U mg/Kg

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 70 - 130 08/19/22 13:54 08/19/22 20:12 78 79 70 - 130 08/19/22 13:54 08/19/22 20:12 o-Terphenyl

Lab Sample ID: LCS 880-32517/2-A Client Sample ID: Lab Control Sample

**Matrix: Solid** 

Analysis Batch: 32464

Prep Batch: 32517 LCS LCS Spike Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics 1000 1106 111 70 - 130 mg/Kg (GRO)-C6-C10 1000 Diesel Range Organics (Over 984 6 98 70 - 130mg/Kg C10-C28)

LCS LCS Surrogate %Recovery Qualifier Limits 111

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

Lab Sample ID: LCSD 880-32517/3-A

Matrix: Solid

**Analysis Batch: 32464** Prep Batch: 32517 Spike LCSD LCSD %Rec Result Qualifier Limits RPD Analyte Added Unit D %Rec Gasoline Range Organics 1000 891.6 \*1 89 70 - 130 mg/Kg 21

Limit 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 963.8 mg/Kg 96 70 - 130 2 20 C10-C28)

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 108 70 - 130 o-Terphenyl 101 70 - 130

**Matrix: Solid** 

Analysis Batch: 32464

Lab Sample ID: 890-2762-A-21-C MS Client Sample ID: Matrix Spike

Prep Batch: 32517

MS MS %Rec Sample Sample Spike Result Qualifier Added Result Qualifier Analyte Unit %Rec Limits

<49.9 U \*1 F1 999 468.5 F1 Gasoline Range Organics 45 70 - 130mg/Kg (GRO)-C6-C10 F2 Diesel Range Organics (Over 78.2 F1 999 515.8 F1 mg/Kg 44 70 - 130

C10-C28)

MS MS Surrogate %Recovery Qualifier Limits 64 S1 70 - 130 1-Chlorooctane 70 - 130 56 S1o-Terphenyl

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**RPD** 

Prep Type: Total/NA

Job ID: 890-2774-1

Client: Ensolum SDG: 03E1558094 Project/Site: Pierce Canyon 28 Battery

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

Lab Sample ID: 890-2762-A-2	ıb Sample ID: 890-2762-A-21-D MSD C										Client Sample ID: Matrix Spike Duplicate					
Matrix: Solid									Prep 1	Type: To	tal/NA					
Analysis Batch: 32464									Prep	Batch:	32517					
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD					
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit					
Gasoline Range Organics	<49.9	U *1 F1	998	954.8	F2	mg/Kg		94	70 - 130	68	20					
(GRO)-C6-C10		F2														
Diesel Range Organics (Over	78.2	F1	998	576.5	F1	mg/Kg		50	70 - 130	11	20					
C10-C28)																

	IVISD	IVISD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	70		70 - 130
o-Terphenyl	60	S1-	70 - 130

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

Lab Sample ID: LCSD 880-32575/3-A

Lab Sample ID: 880-18347-A-5-B MS

Lab Sample ID: MB 880-32575/1-A	Client Sample ID: Method Blank
Matrix: Solid	Prep Type: Soluble
Analysis Batch: 32882	

	IVID	MID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			08/25/22 06:18	1

Lab Sample ID: LCS 880-32575/2-A			Client Sample ID: Lab Control Sample
Matrix: Solid			Prep Type: Soluble
Analysis Batch: 32882			
	Spike	LCS LCS	%Rec

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	 250	237.6		mg/Kg		95	90 - 110	

Matrix: Solid Analysis Batch: 32882							Prep	Type: So	oluble
-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	237.7		mg/Kg		95	90 - 110	0	20
_									

Matrix: Solid Analysis Batch: 32882									Prep Type: Soluble
	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits

Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	222	F1 F2	249	354.8	F1	mg/Kg		53	90 - 110		
 Lab Sample ID: 880-18347-A-5	CMSD					Clie	nt C	ample IF	D: Matrix Sı	nika Dunli	oato
Lab Sample ID. 000-10347-A-3	-C M2D					Cile	HIL O	ampie il	J. IVIALITIX O	Jike Dupii	Cale

Analysis Batch: 32882									Prep	Type: So	oluble
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	222	F1 F2	249	464.4	F2	mg/Kg		98	90 - 110	27	20

**Eurofins Carlsbad** 

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

Client Sample ID: Matrix Spike

# **QC Association Summary**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2774-1 SDG: 03E1558094

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#### **GC VOA**

Prep Batch: 32705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-32705/5-B	Method Blank	Total/NA	Solid	5035	

#### Prep Batch: 32855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2774-1	BH01	Total/NA	Solid	5035	
890-2774-2	BH01A	Total/NA	Solid	5035	
890-2774-3	BH01B	Total/NA	Solid	5035	
MB 880-32855/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32855/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32855/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2774-1 MS	BH01	Total/NA	Solid	5035	
890-2774-1 MSD	BH01	Total/NA	Solid	5035	

#### **Analysis Batch: 33040**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2774-1	BH01	Total/NA	Solid	8021B	32855
890-2774-2	BH01A	Total/NA	Solid	8021B	32855
890-2774-3	BH01B	Total/NA	Solid	8021B	32855
MB 880-32705/5-B	Method Blank	Total/NA	Solid	8021B	32705
MB 880-32855/5-A	Method Blank	Total/NA	Solid	8021B	32855
LCS 880-32855/1-A	Lab Control Sample	Total/NA	Solid	8021B	32855
LCSD 880-32855/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32855
890-2774-1 MS	BH01	Total/NA	Solid	8021B	32855
890-2774-1 MSD	BH01	Total/NA	Solid	8021B	32855

#### Analysis Batch: 33224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2774-1	BH01	Total/NA	Solid	Total BTEX	
890-2774-2	BH01A	Total/NA	Solid	Total BTEX	
890-2774-3	BH01B	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

### Analysis Batch: 32464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2774-1	BH01	Total/NA	Solid	8015B NM	32517
890-2774-2	BH01A	Total/NA	Solid	8015B NM	32517
890-2774-3	BH01B	Total/NA	Solid	8015B NM	32517
MB 880-32517/1-A	Method Blank	Total/NA	Solid	8015B NM	32517
LCS 880-32517/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	32517
LCSD 880-32517/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	32517
890-2762-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	32517
890-2762-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	32517

#### Prep Batch: 32517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2774-1	BH01	Total/NA	Solid	8015NM Prep	
890-2774-2	BH01A	Total/NA	Solid	8015NM Prep	
890-2774-3	BH01B	Total/NA	Solid	8015NM Prep	
MB 880-32517/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-32517/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

**Eurofins Carlsbad** 

Released to Imaging: 12/14/2022 4:21:05 PM

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# **QC Association Summary**

Client: Ensolum Job ID: 890-2774-1
Project/Site: Pierce Canyon 28 Battery SDG: 03E1558094

GC Semi VOA (Continued)

Prep Batch: 32517 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-32517/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2762-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2762-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 32662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2774-1	BH01	Total/NA	Solid	8015 NM	
890-2774-2	BH01A	Total/NA	Solid	8015 NM	
890-2774-3	BH01B	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 32575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2774-1	BH01	Soluble	Solid	DI Leach	_
890-2774-2	BH01A	Soluble	Solid	DI Leach	
890-2774-3	BH01B	Soluble	Solid	DI Leach	
MB 880-32575/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-32575/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-32575/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-18347-A-5-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-18347-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 32882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-2774-1	BH01	Soluble	Solid	300.0	32575	
890-2774-2	BH01A	Soluble	Solid	300.0	32575	
890-2774-3	BH01B	Soluble	Solid	300.0	32575	
MB 880-32575/1-A	Method Blank	Soluble	Solid	300.0	32575	
LCS 880-32575/2-A	Lab Control Sample	Soluble	Solid	300.0	32575	
LCSD 880-32575/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	32575	
880-18347-A-5-B MS	Matrix Spike	Soluble	Solid	300.0	32575	
880-18347-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	32575	

**Eurofins Carlsbad** 

Project/Site: Pierce Canyon 28 Battery

	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	32855	08/24/22 14:35	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33040	08/27/22 13:47	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33224	08/29/22 12:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			32662	08/22/22 13:19	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.02 g	10 mL	32517 32464	08/19/22 13:54 08/20/22 02:19	DM SM	EET MID EET MID
Soluble Soluble	Leach Analysis	DI Leach 300.0		1	4.97 g 0 mL	50 mL 0 mL	32575 32882	08/21/22 17:21 08/25/22 20:44	SMC SMC	EET MID EET MID

Client Sample ID: BH01A

Date Collected: 08/16/22 09:55

Lab Sample ID: 890-2774-2

Matrix: Solid

Date Received: 08/17/22 16:13

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	32855	08/24/22 14:35	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33040	08/27/22 14:08	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33224	08/29/22 12:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			32662	08/22/22 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	32517	08/19/22 13:54	DM	EET MID
Total/NA	Analysis	8015B NM		1			32464	08/20/22 02:41	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	32575	08/21/22 17:21	SMC	EET MID
Soluble	Analysis	300.0		1	0 mL	0 mL	32882	08/25/22 09:27	SMC	EET MID

**Client Sample ID: BH01B** 

Date Collected: 08/16/22 10:00 Date Received: 08/17/22 16:13

Lab	Sample	e ID: 890-2774-3	
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	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	32855	08/24/22 14:35	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33040	08/27/22 14:28	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33224	08/29/22 12:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			32662	08/22/22 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32517	08/19/22 13:54	DM	EET MID
Total/NA	Analysis	8015B NM		1			32464	08/20/22 03:03	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	32575	08/21/22 17:21	SMC	EET MID
Soluble	Analysis	300.0		1	0 mL	0 mL	32882	08/25/22 09:34	SMC	EET MID

Laboratory References:

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

**Eurofins Carlsbad** 

**Matrix: Solid** 

# **Accreditation/Certification Summary**

Client: Ensolum
Project/Site: Pierce Canyon 28 Battery
SDG: 03E1558094

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date	
Texas	NI	ELAP	T104704400-22-24	06-30-23	
The following analytes the agency does not of		ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo	
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
OO IO INWI					

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# **Method Summary**

Client: Ensolum Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2774-1

SDG: 03E1558094

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

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

**Eurofins Carlsbad** 

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# **Sample Summary**

Client: Ensolum

Project/Site: Pierce Canyon 28 Battery

Job ID: 890-2774-1

SDG: 03E1558094

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2774-1	BH01	Solid	08/16/22 09:50	08/17/22 16:13	0.5
890-2774-2	BH01A	Solid	08/16/22 09:55	08/17/22 16:13	1
890-2774-3	BH01B	Solid	08/16/22 10:00	08/17/22 16:13	2

Circle Method(s) and Metal(s) to be analyzed

Total 200.7 / 6010

200.8 / 6020:

8RCRA 13PPM Texa

TCLP / SPLP 6010

service. Eurofins Xanco will be liable only for the cost of samples and shall not assume any respo Eurofins Appen Aminimum charge of \$85.00 will be applied to each project and a charge of \$6 for ice: Signature of this document and relinquishment of samples constitutes a valid purchase orde

Religiquished by:

fature)

Received by: (Signature)

eurofins Kenca Environment Testing

Phone:

9898540852 Carlsbad, NM 88220

Email: bbelil@e Turn Around

City, State ZIP

Company Name: Project Manager:

Ensolum, LLC Ben Belill

3122 National parks Hwy

Address:

Project Name:

Pierce Canyon 28 Battery

03E1558094

EDDY COUNTY, NM

Due Date: ☑ Routine

Kase Parker

Samples Received Intact: SAMPLE RECEIPT

Sample Custody Seals: Cooler Custody Seals:

Yes No N/A Temperature Reading:

Corrected Temperature:

Yes No AND

Correction Factor: Thermometer ID:

Temp Blank:

Yes No Wet Ice:

the lab, if received by 4:3 TAT starts the day receive

N<sub>O</sub>

Sample Identification

Matrix

Date

Time

Sampled

0320

BH01A BH01B

> 8/16/2022 8/16/2022 Sampled

8250

8/16/2022

1000

BH01

Sampler's Name: Project Location: Project Number:

# 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

Work Order No:

	iture)	surchase order from effent company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions sime any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control harge of \$6 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	PPM Texas 11 AI SPLP 6010: 8RCRA					2' Grab/		0.5' Grab/	Depth Comp	٦ ک	۲, د	10100 1000 1000 1000 1000	Yes No	ceived by 4:30pm	le day received by	Rush	n Around	bbelill@ensolum.com	City, State ZIP:	Address:	Company Name	Bill to: (if different)
~		m client o oility for a oh sample	RCRA					<u>ه</u>	<u>5</u>	b/ 1	b/ # of ip Cont			Para	mete		<u> </u>	Code		olum.co	, ÿ		ne	ent)
1 -3	Date	ompany ny losse: submitt	Al Sb As					×	×	×	CHLOR	RIDES	(EP	A: 30	0.0)					m	Carlst	3104	хто	Garre
1.00	Date/Time	to Eurof s or expe ed to Eu	S E					×	×	×	TPH (86	015)									Carlsbad, NM 88220	3104 E. Green Street	XTO Energy, Inc	Garrett Green
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	Received by: (Signature)	tions control sgotiates	Ag SiO <sub>2</sub> Na Sr Tl Sn U V Zr Hg: 1631/245.1/7470/7471		++	+	H			├								$\vdash$		₽	=	l	Bro	<b>Work Order Comments</b>
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			TI Sn U V		D.N.A					enter:	ple C	corbic	e+Na0	NaSO:	NARIS		_		ervat	Other:	TRRP		RRC[	65
	Date/Time		V Zn 7471		PP221				100	1081	Sample Comments	NaOH+Ascorbic Acid: SAPC	H: Zn	<b>~</b>		NaOI	MeO	DΙW	<b>Preservative Codes</b>				Sup	
	ime				Incident ID:NAPP2218642544				100	Cost Center: 1081071001	ents	SAPC				NaOH: Na	MeOH: Me HNO <sub>3</sub> : HN	DI Water: H <sub>2</sub> O	odes		Level IV		Superfund []	
					54 4													20		JL	È	]		

# **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2774-1
SDG Number: 03E1558094

Login Number: 2774 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

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# **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2774-1

SDG Number: 03E1558094

Login Number: 2774
List Source: Eurofins Midland
List Number: 2
List Creation: 08/19/22 10:36 AM

Creator: Rodriguez, Leticia

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

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<6mm (1/4").



APPENDIX E

**NMOCD Notifications** 

#### Collins, Melanie

From: Green, Garrett J

**Sent:** Tuesday, June 28, 2022 12:21 PM

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

Jennifer, EMNRD

**Cc:** DelawareSpills /SM; Pennington, Shelby G

**Subject:** XTO 24 Hour Notification - Pierce Canyon 28 Battery - Released on 6/27/22

All,

This is notification of a release greater than 25 barrels that occurred yesterday at the Pierce Canyon 28 Battery near the GPS coordinates given below. All of the fluids remained in containment and all standing fluids were recovered by vacuum truck. Details will be provided with a form C-141. Please contact us with any questions or concerns.

GPS: 32.18245,-103.88038

Thank you,

#### **Garrett Green**

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

XTO Energy, Inc.

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

#### **Green, Garrett J**

From: Green, Garrett J

**Sent:** Friday, July 1, 2022 10:21 AM

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

**Cc:** DelawareSpills /SM

**Subject:** XTO - 48 Hour Liner Inspection Notification - Pierce Canyon 28 Battery - Released on

6/27/22

Follow Up Flag: Follow up Flag Status: Completed

Good morning,

This is sent as a 48-hour notification, XTO is scheduled to inspect the lined containment at Pierce Canyon 28 Battery released on (6/27/22), on Tuesday, July 5, 2022, at 9am MST. A 24 hour release notification was sent out on Tuesday, June 28, 2022 12:21 PM since the release was greater than 25 barrels in volume. Please call us with any questions or concerns.

GPS Coordinates: (32.18245,-103.88038)

Thank you,

#### **Garrett Green**

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

XTO Energy, Inc.

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

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

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

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

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 145795

#### **CONDITIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	145795
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
jharimon	Please note that closure samples must be received at a temperature below 4 degrees F	12/14/2022