

CLOSURE REQUEST REPORT

Site Location:

EP USA 3 Eddy County, New Mexico Incident Number: nAB1622531873

May 11, 2023 Ensolum Project No. 03A1987053

Prepared for:

WPX Energy Permian, LLC 5315 Buena Vista Drive Carlsbad, New Mexico 88220 Attention: Jim Raley

Prepared by:

Ashley N. Giovengo Senior Engineer Daniel R. Moir, PG Senior Managing Geologist

TABLE OF CONTENTS

1.0	INTRODUCTION	1
	1.1 Site Description	1
	1.2 Release Background	1
	1.3 Site Characterization	1
2.0	REMEDIATION ACTIONS	2
	2.1 Delineation Activities	2
	2.2 Laboratory Analytical Results	2
	2.3 Excavation Activities	3
	2.4 Laboratory Analytical Results	3
	2.5 Waste Handling	3
3.0	CLOSURE REQUEST	4

REFERENCE MATERIALS

FIGURES

Figure 1: Site Map

Figure 2: Delineation Soil Sample Locations

Figure 3: Excavation Soil Sample Locations

TABLES

Table 1: Soil Sample Analytical Results

APPENDICES

Appendix A: C-141 Form

Appendix B: Groundwater Measurement Form

Appendix C: Lithologic Soil Sampling Logs

Appendix D: Photographic Log

Appendix E: Laboratory Analytical Reports & Chain-of-Custody Documentation

Appendix F: Email Correspondence



1.0 INTRODUCTION

1.1 Site Description

Ensolum, LLC (Ensolum) has prepared this *Closure Request Report* (CRR) to document assessment and corrective actions performed to date, and subsequent soil sampling activities conducted for WPX Energy Permian, LLC (WPX) at the EP USA 3 (Site), located in Unit I, Section 26, Township 26 South, Range 29 East, in Eddy County, New Mexico (**Figure 1**). Based on all remedial actions and results of soil sampling events completed for the release of crude oil and produced water at the Site, WPX respectfully requests no further action (NFA) for Incident Number nAB1622531873.

On May 10, 2019, a *Closure Request* (CR), authored by LT Environmental, Inc. (LTE), was submitted to the New Mexico Oil Conservation Division (NMOCD) for the release; however, WPX did not receive a response from NMOCD. Since the submittal of the CR, WPX has decommissioned the Site and reclaimed the pad area. As a result, WPX reassessed field activities previously completed and determined additional remedial actions were warranted due to the current applicability of Title 19, Chapter 15, Part 29, Section 13 (19.15.29.13) of the New Mexico Administrative Code (NMAC), detailing reclamation requirements. As such, WPX conducted additional remediation activities at the Site to address waste-containing soil in the top 4 feet of the well pad to be reclaimed. All previous remediation activities and soil sample analytical results for the subject release can be referenced in the original CR and other supporting documents uploaded to NMOCD and CentreStack portal.

1.2 Release Background

On July 28, 2016, a tank overflow resulted in the release of approximately 45 barrels (bbls) of crude oil and produced water inside the earthen berm tank battery containment. A vacuum truck was immediately dispatched to the Site and recovered 41 bbls of fluid contained within the unbreeched, earthen berm. The incident was reported to the NMOCD on a Release Notification and Corrective Action Form (Form C-141) on July 29, 2016, and was subsequently assigned Incident Number nAB1622531873 (**Appendix A**).

1.3 Site Characterization

The Site was assessed for applicability of Table 1, *Closure Criteria for Soils Impacted by a Release*, from 19.15.29 NMAC. Results from the characterization desktop review are presented on page 3 of Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on **Figure 1**.

Depth to groundwater at the Site is estimated to be between 51 feet and 100 feet below ground surface (bgs) based on a recent measurement of a nearby well at the JC Williams Yard, located approximately 0.5 miles west of the Site. The well does not appear to have an identification number corresponding to the New Mexico Office of the State Engineer (NMOSE) well records; however, Ensolum obtained property access and measured depth to groundwater on August 15, 2022. Depth to groundwater was measured at 82.9 feet bgs. The location of the JC Williams groundwater well is provided on **Figure 1**. The Groundwater Measurement Form summarizing findings is provided as **Appendix B**.



The closest continuously flowing or significant watercourse to the Site is an intermittent stream, located approximately 451 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from any occupied residence, school, hospital, institution, church, and wetland and greater than 1,000 feet to a freshwater well or spring. The Site is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area).

Based on the desktop review of nearby receptors and depth to groundwater determination at the Site, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

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

Per 19.15.29.13 NMAC, a reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the area to be reclaimed.

2.0 REMEDIATION ACTIONS

2.1 Delineation Activities

On October 4, 2022, four delineation potholes (PH01 through PH04) were advanced via mechanical equipment within the the subject area release to assess the presence or absence of waste-containing soil. Ensolum directed delineation activites by field sceening soil for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. A minimum of two soil samples were collected from each delineation pothole location: the samples with the highest observed field screening (0.5 feet bgs) and the greatest depth (4 feet bgs) were jarred for laboratory analysis. The location of the delineation samples are shown in **Figure 2**. Field screening results and observations for each delineation soil sample were recorded on lithologic/soil sampling logs (**Appendix C**). Photographic documentation during delineation activities is included in **Appendix D**.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures, to Eurofins LLC (Eurofins) in Carlsbad, New Mexico, for analysis of the following constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH following EPA Method 8015M/D; and chloride following EPA Method 300.0.

2.2 Laboratory Analytical Results

Laboratory analytical results from delineation soil samples collected from pothole samples PH02 and PH03 at approximately 0.5 feet bgs indicated concentrations of TPH exceeded the reclamation requirement. Laboratory analytical results for all other delineation soil samples indicated all COC concentrations were in compliance with the applicable Closure Criteria, the reclamation requirement, and assisted with defining the vertical and lateral extents of waste-containing soil at the Site. Based on analytical results of soil samples PH02 and PH03 at 0.5 feet bgs, additional remedial actions were warranted.



2.3 Excavation Activities

During the months of October and November 2022, Ensolum was onsite to oversee excavation activities performed utilizing heavy equipment. Excavation activities were directed by referencing laboratory analytical results for PH02 and PH03 and field screening for VOCs and chloride as previously described. As a result, two seperate excavations were advanced to address waste-containing soil identified during delineation activities. A photographic log of excavation activities is included as **Appendix D**.

Following the removal of waste-containing soil, Ensolum collected 5-point composite excavation confirmation soil samples every 200 square feet from the floor and sidewalls of the excavations. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil sample FS01 was collected from the eastern excavation floor at 1-foot bgs. Due to the shallow depth of the eastern excavation, soil sample aliquots from the excavation sidewalls were incorporated into the floor sample. Confirmation soil samples FS02 through FS08 were collected from the western excavation floor at depths ranging from 1-foot to 3 feet bgs. Confirmation soil samples SW01 through SW03 were collected from the excavation sidewalls at depths ranging from the ground surface to 3 feet bgs. The confirmation excavation soil samples were handled and analyzed for COCs following the same procedures described above. The excavation extents and excavation confirmation soil sample locations are depicted on **Figure 3**.

2.4 Laboratory Analytical Results

Laboratory analytical results for all excavation soil samples indicated all COC concentrations were below the applicable Site Closure Criteria.

Analytical results for all sidewall samples SW01 through SW03 indicated TPH concentrations exceeded the reclamation requirement. As a result, the excavation was extended in the respective areas. Following the removal of the residual waste-containing soil, Ensolum collected three 5-point composite excavation soil samples (SW03 through SW06) from the new excavation sidewalls (**Figure 3**). The confirmation soil samples were collected, handled, and analyzed following the same procedures as previously described. Laboratory analytical results indicated all COC concentrations were in compliance with the reclamation requirement.

Laboratory analytical results are summarized on **Table 1**. The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix E**. **Appendix F** provides correspondence email notification receipts associated with the subject release.

2.5 Waste Handling

A total of approximately 220 cubic yards of waste-containing soil were excavated and removed from the Site. All waste containing soil was transported to an R360 landfill facility located in Orla, Texas under WPX-approved manifests. The excavations were backfilled with locally sourced topsoil to match pre-existing Site conditions.



3.0 CLOSURE REQUEST

The primary objectives of Ensolum's scope of services were to document remediation activities performed at the Site in accordance with the applicable NMOCD regulatory guidelines. Based on the results documented in this report, the following findings and conclusions regarding the subject release is presented:

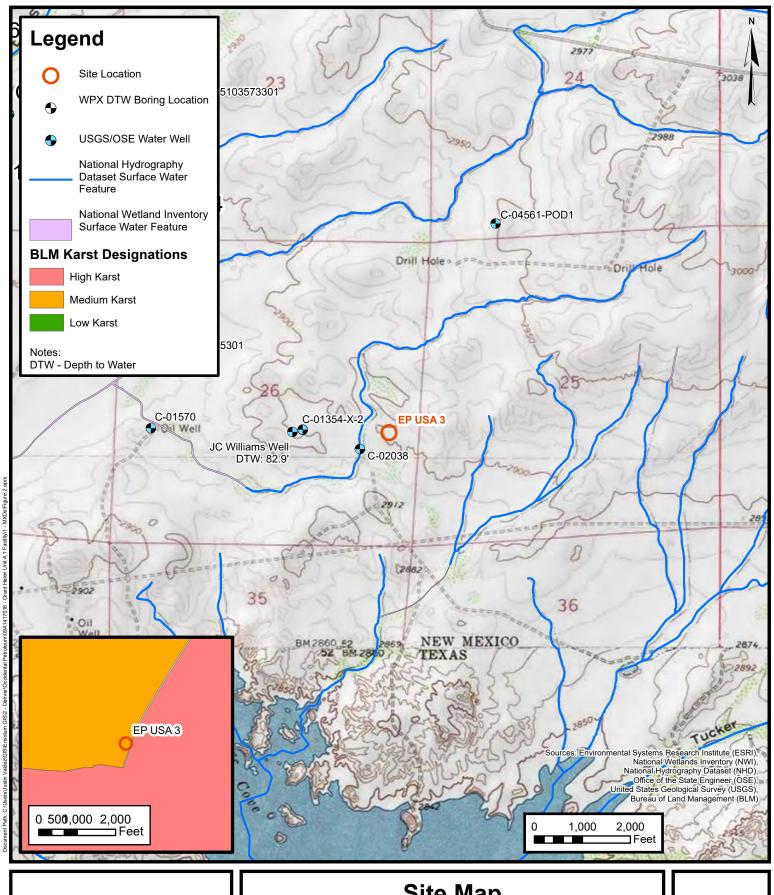
- Laboratory analytical results for delineation soil samples from potholes PH01 and PH04 were in compliance with the Site Closure Criteria, thus provide additional confirmation for the lateral delineation of soil impacts;
- Identified TPH concentrations exceeding the reclamation requirement in delineation potholes PH02 and PH03 at 0.5 feet bgs were subsequently excavated via mechanical equipment. A total of approximately 220 cubic yards of waste-containing soil were excavated from the Site during excavation activities and disposed in accordance with state and federal regulations;
- Laboratory analytical results for all final excavation confirmation soil samples indicated all COC concentrations were below the applicable Site Closure Criteria as well as the reclamation requirement;
- The excavations have been backfilled with locally sourced topsoil to match pre-existing Site conditions.

Based on the conclusions presented, WPX believes the remediation activities described above have met the requirements set forth in 19.15.29 NMAC and have been protective of human health, the environment, and groundwater. As such, WPX respectfully requests closure of Incident Number nAB1622531873.





FIGURES

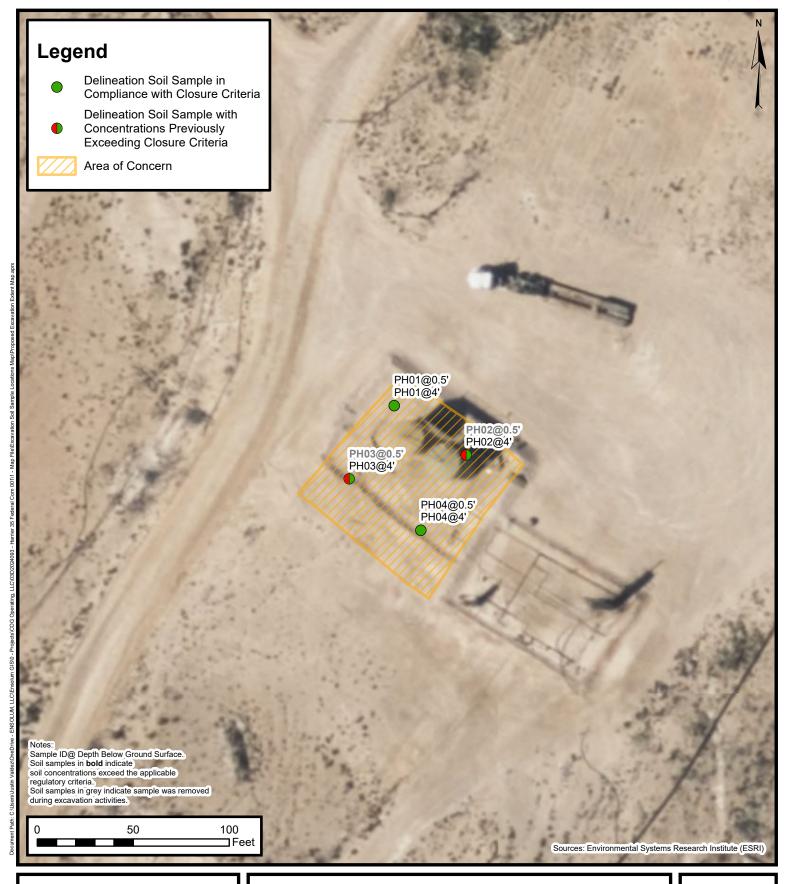




Site Map

EP USA 3 WPX Energy Permian, LLC Unit I, Section 26, Township 26S, Range 29E Eddy County, New Mexico

FIGURE

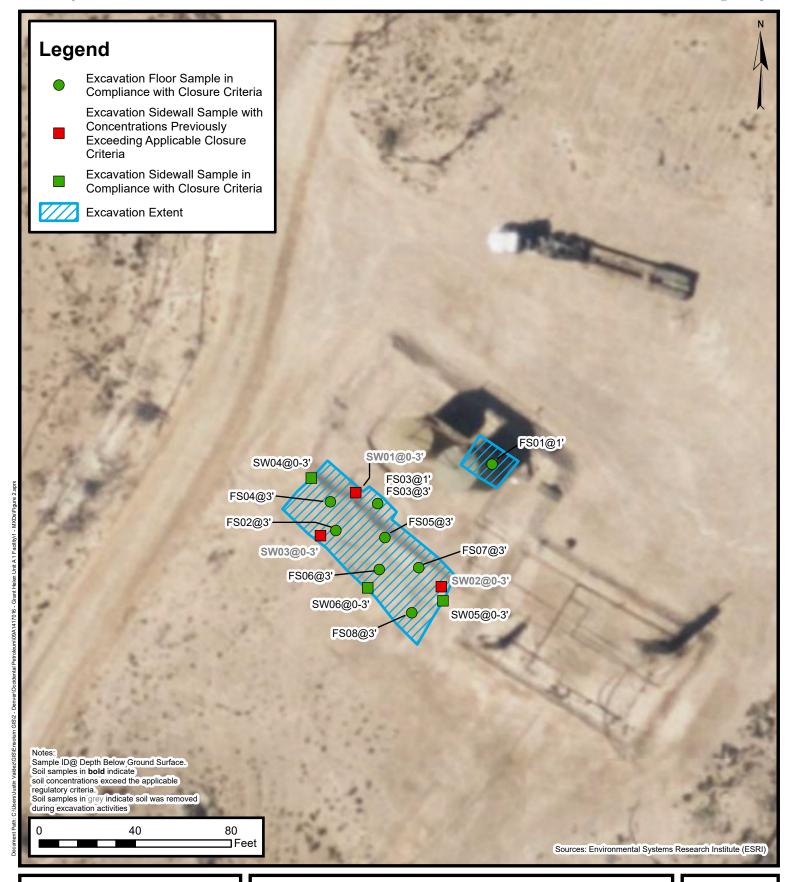




Delineation Soil Sample Locations

EP USA 3 WPX Energy Permian, LLC Unit I, Section 26, Township 26S, Range 29E Eddy County, New Mexico **FIGURE**

2





Excavation Soil Sample Locations

EP USA 3 WPX Energy Permian, LLC Unit I, Section 26, Township 26S, Range 29E Eddy County, New Mexico **FIGURE**

3



TABLES



TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS WPX Energy Permian, LLC EP USA 3 Eddy County, New Mexico Ensolum Project No. 03A1987053

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I	Closure Criteria	(NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
				Delineation	on Soil Sample Analy	tical Results				
PH01	10/04/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	79.3
PH01	10/04/2022	4	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	53.4
PH02	10/04/2022	0.5	<0.00200	< 0.00399	<49.9	138	358	138	496	95.6
PH02	10/04/2022	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	55.5
PH03	10/04/2022	0.5	<0.00200	<0.00401	<49.9	202	569	202	771	304
PH03	10/04/2022	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	430
PH04	10/04/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	102
PH04	10/04/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	466
				Excavation	on Soil Sample Analy	tical Results				
FS01	10/26/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	113
FS02	10/26/2022	3	<0.00201	<0.00402	<49.8	<49.8	60.3	60.3	60.3	286
FS03	10/26/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	237
FS04	11/01/2022	3	<0.00201	<0.00402	<50.0	90.8	<50.0	90.8	90.8	216
FS05	11/01/2022	3	<0.00199	<0.00398	<50.0	78.0	<50.0	78.0	78.0	241
FS06	11/01/2022	3	<0.00200	<0.00399	59.2	<50.0	<50.0	59.2	59.2	176
FS07	11/01/2022	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	171
FS08	11/01/2022	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	169

Ensolum 1 of 2



TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS WPX Energy Permian, LLC EP USA 3 Eddy County, New Mexico Ensolum Project No. 03A1987053

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I	l Closure Criteria	(NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
SW01	10/31/2022	0-3	<0.00200	<0.00399	<50.0	180	69.4	249.4	249.4	209
SW02	10/31/2022	0-3	< 0.00199	<0.00398	<49.8	194	<49.8	194	194	145
SW03	11/01/2022	0-3	< 0.00199	<0.00398	<50.0	188	<50.0	188	188	157
SW04	12/06/2022	0-3	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	171
SW05	12/06/2022	0-3	<0.00200	<0.00401	<49.0	<49.0	<49.0	<49.0	<49.0	253
SW06	12/06/2022	0-3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	190

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria and/or Reclamation

Standard for Soils Impacted by a Release

Grey text represents samples that have been excavated

Ensolum 2 of 2



APPENDIX A

Groundwater Measurement Form

Received by OCD: 5/11/20	23 9.24.53 /	1M									Page 15
Client: Devon Energy Project Name: JC Williams Well GW m Project Location: 32.0105289,-10 Project Manager: Joseph Hernand	GROUNDWATER MEASUREMENT FORM										
Date Completed: 08/15/2022 Total Depth of Monitor Well: NA Screen Interval: NA	Soil Boring / Monitor Well Number: NA Project #: 03A1987013 Type of Water Quality Meter: NA Date Calibrated: NA Other Notes: used decontaminated water level indicator meter to measure groundwater depth in existing well										
Sample Tubing Intake Depth: NA Geologist: Gilbert Moreno		-	_ 	-	-	-	-		-	-	
Tubing Placement G\	W Depth (static)	After Purge	Time (minutes)	Purge Rate	Temp.	pH (unitless)	DO (mg/L)	ORP (mV)	Cond. (mS/cm)	GW Depth (feet)	Comments:
			NR	NR	NR	NR	NR	NR	NR	82.9	NA = Not Available NR = Not Recorded
											E FNSOLUM



APPENDIX B

C-141 Form

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

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

NM OIL CONSERVATION

ARTESIA DISTRICT Form C-141
Revised August 8, 2011

Shomit 1 2016 Shomit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

		-	Rele	ease Notific	ation	and Co	rrective A	ction					
NABI	6 225	31873		A.I. A.O.		OPERA T		\boxtimes	Initi	al Report		Final Repor	rt
Name of Co Address		WPX Energ ena Vista D		1 346380	-	Contact	Karolina Blan						_
Facility Nan			Γ,			io. 970 589 074 e: Well Pad/ Ta		v				-	
									_				
Surface Owner: Federal Mineral Owner: Federal API No. 30-015-24249													
4 7 1 7 1	6 .:	l			OF REI	~			1 -			_	
Unit Letter	Section	Township	Range	Feet from the	North/S	South Line	Feet from the	East/Wes	st Line	County			
I	26	26S	29E	1980	FSL		460	FEL		Eddy			
Latitude: 32.030564 N Longitude: -103.8912511 W NATURE OF RELEASE 90i / 26W+Y. 180i /23 W+r.													
Type of Relea		ed Water and	l Oil			Volume of	Release: 15 Bbls		Volum	e Recovered	l: 5 Bt	bls	
Source of Rel Tank Battery						Date and H	our of Occurrence	2		nd Hour of I 016 – 2230 I		•	
Was Immedia			Yes [No ⊠ Not Re	quired	If YES, To	Whom? leather Patterson	& Michael					_
By Whom? K							our: 7/29/16 11:			ail			
Was a Watero	course Reac	ched?	Yes 🗵	No		N/A	lume Impacting th	ne Waterco	ourse.				
If a Watercou	rse was Im	pacted, Descr	ibe Fully.	N/A									_
Cause of this overfill. Approf oil and 23	spill is hun oximately	nan error. The 45 bbls of pro	well on k	n Taken.* ocation was suppo or and oil was spi	sed to be lled insid	e temporarily de dirt SPCC	sbut in for a pipe containment. 41	line mainte	enance t e spilled	out it wasn't fluids were	causin recove	ng the tank to ered: 18 bbls	
Describe Area	a Affected	and Cleanup A	Action Tal	cen.*									_
accordance w BLM. Further	rith NM OC r remediation	D Guidelines on will be bas	for Reme ed on thes	and hauled off to a diation of Leaks, S e results. The total Il did not impact a	Spills, ar I ranking	nd Releases. ' g score for thi	The impacted area is site is 10 and th	will also	be samp	led for chlo	rides a	s required hy	
regulations al public health should their o	l operators or the envir operations h nment. In a	are required to ronment. The lave failed to a ddition, NMC	o report and acceptance adequately DCD accep	e is true and complete is true and complete of a C-141 reposition and restricted and restrance of a C-141 repositions.	elease no rt by the emediate	otifications are NMOCD me contaminati	nd perform correct arked as "Final Ro on that pose a thro e the operator of r	tive action eport" doe: eat to grou esponsibil	s for rel s not rel nd wate ity for c	eases which ieve the ope r, surface wa ompliance v	may e rator o ater, hu vith an	endanger of liability uman health	
Signature:	Karolina	Blaney					OIL CONS	SERVA	TION 11	DIVISTO	<u>N(</u>		
Printed Name						Approved by	Environmental S _I	occialist:	py	/Zm	•		
Title: Enviro	nmental Sp	ecialist			,	Approval Dat	e: 8/12/11	.Exj	piration	Date:	1/4		
E-mail Addre	ss: Karolit	na.blaney@wj	oxenergy.c	com		Conditions of	Approval: on per O.C.D.	Rules &	Guide	lines Attached			
Date: 8/11//2				ne: 970-589-0743		LIBMIT R	EMEDIALIYIY	PROPO:	SAL N	<u> </u>			_
Attach Addit	tional Shee	ets If Necess	ary		ı	ATER TH	AN:			21	Sb ⁻	3824	,

Received by OCD: 5/11/2023 9:24:53 AM State of New Mexico
Page 2 Oil Conservation Division

e of New Mexico

Incident ID nAB1622531873

Incident ID	nAB1622531873
District RP	
Facility ID	
Application ID	

Was this a major release as defined by	If YES, for what reason(s) does the responsible Volume exceeded 25 bbls.	onsible party consider this a major release?								
19.15.29.7(A) NMAC?	100000000000000000000000000000000000000									
⊠ Yes □ No										
	otice given to the OCD? By whom? To w OCD on 07/29/2016 by Karolina Blaney vi	whom? When and by what means (phone, email, etc)? a email.								
	Initial R	Response								
The responsible	The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury									
☐ The source of the rele	ease has been stopped.									
The impacted area ha	s been secured to protect human health and	d the environment.								
Released materials ha	ave been contained via the use of berms or	dikes, absorbent pads, or other containment devices.								
All free liquids and re	ecoverable materials have been removed a	nd managed appropriately.								
If all the actions described	d above have <u>not</u> been undertaken, explain	why:								
Dar 10 15 29 8 R (4) NM	AC the reconneible party may commence	remediation immediately after discovery of a release. If remediation								
has begun, please attach	a narrative of actions to date. If remedial	efforts have been successfully completed or if the release occurred please attach all information needed for closure evaluation.								
I hereby certify that the info	rmation given above is true and complete to the	e best of my knowledge and understand that pursuant to OCD rules and								
public health or the environr	nent. The acceptance of a C-141 report by the	ocd does not relieve the operator of liability should their operations have								
		reat to groundwater, surface water, human health or the environment. In f responsibility for compliance with any other federal, state, or local laws								
and/or regulations.	- u - c - c - F - c - c - c - c - c - c - c									
Printed Name: Jim Raley		Title: EHS Professional								
Signature:	Jin Roby	Date: <u>05/10/2023</u>								
email: jim.raley@dvn.coi	n	Telephone: <u>575-689-7597</u>								
OCD Only										
Received by:		Date:								

e of New Mexico

Incident ID nAB1622531873

Incident ID	nAB1622531873
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?	82.9 (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)?								
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No							
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No							
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No							
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No							
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No							
Are the lateral extents of the release overlying a subsurface mine?								
Are the lateral extents of the release overlying an unstable area such as karst geology?								
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No							
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ⊠ No							
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.								
Characterization Report Checklist: Each of the following items must be included in the report.								
 Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well	ls.							
☐ Data table of soil contaminant concentration data								
Depth to water determination Determination of water sources and significant watersources within 1/2 mile of the letteral extents of the release.								
 ✓ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release ✓ Boring or excavation logs 								
☐ Borning of excavation logs Photographs including date and GIS information								
☐ Topographic/Aerial maps								
☐ Laboratory data including chain of custody								

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

Received by OCD: 5/11/2023 9:24:53 AM
State of New Mexico
Page 4
Oil Conservation Division

 Page 20 of 282

 Incident ID
 nAB1622531873

 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: Jim Raley Title: EHS Professional _____ Date: <u>05/10/2023</u> Signature: ____ Telephone: <u>575-689-7597</u> email: <u>jim.raley@dvn.com</u> **OCD Only** Jocelyn Harimon Received by: ___ Date: ____05/11/2023___

Page 21 of 282

Incident ID	nAB1622531873
District RP	
Facility ID	
Application ID	

Closure

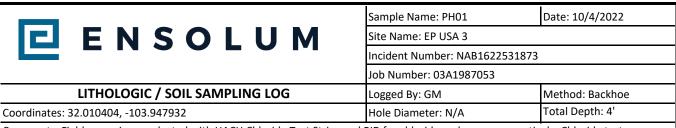
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled 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 it	tems must be included in the closure report.							
A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC							
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)								
☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)								
Description of remediation activities								
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of	tions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in							
Printed Name: <u>Jim Raley</u>	Title: EHS Professional							
Signature:	Date: <u>05/10/2023</u>							
email: jim.raley@dvn.com								
OCD Only								
Received by: Jocelyn Harimon	Date:05/11/2023							
remediate contamination that poses a threat to groundwater, surface very party of compliance with any other federal, state, or local laws and/o								
Closure Approved by: <u>Ashley Maxwell</u> Printed Name: <u>Ashley Maxwell</u>	Date:5/17/2023							
Printed Name:Ashley Maxwell	Title: Environmental Specialist							



APPENDIX C

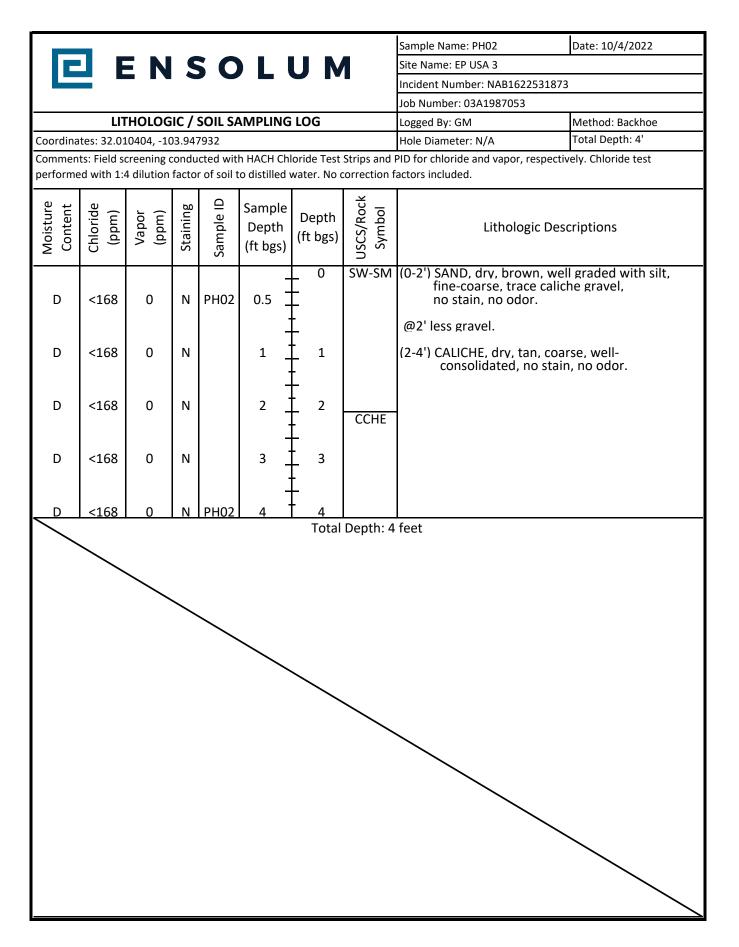
Lithologic Soil Sampling Logs

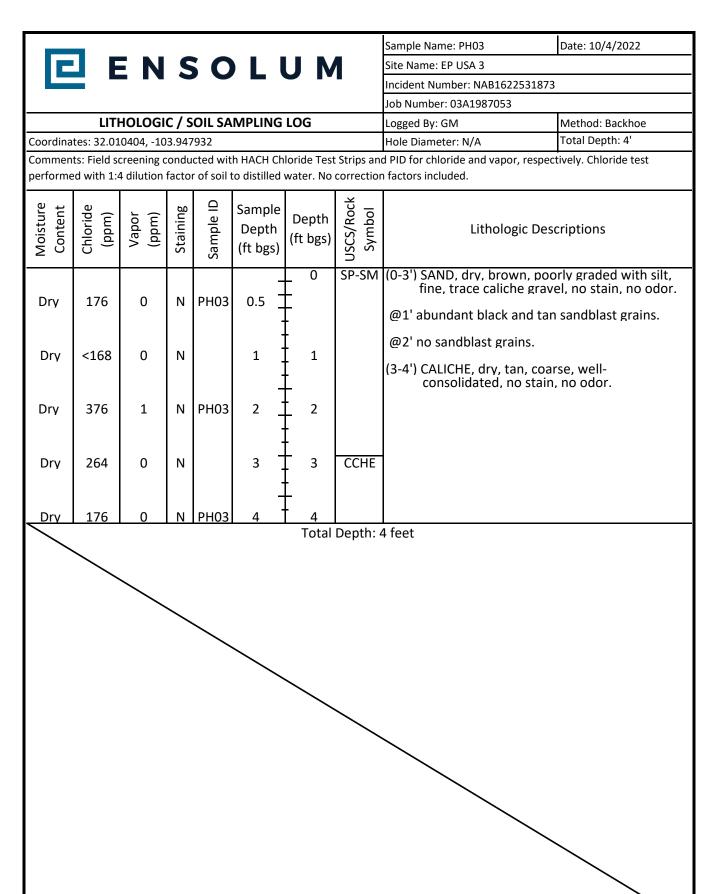


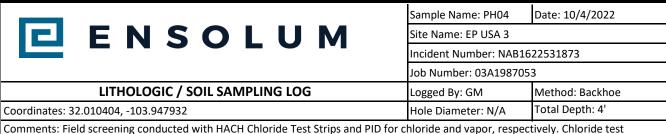
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<168	0	N	PH01	0.5	0	CCHE	(0-1') CALICHE, dry, tan, fine-coarse, trace gravel, no stain, no odor. (1-2') SAND, dry, brown, well graded with silt, fine, trace caliche gravel, no stain, no odor.
D	<168	0	N		1 _	1	SW-SM	(2-4') CALICHE, dry, tan, coarse, well consolidated, no stain, no odor.
D	<168	0	N		2	2	ССНЕ	
D	<168	0	N		3 _	3		
D	<168	0	N	PH01	4	4		

Total Depth: 4 feet







Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<168	0	N	PH04	0.5	0	SW-SM	(0-2'), SAND, dry, brown, well-graded with silt, fine-coarse, trace gravel, no stain, no odor.
D	<168	0	N		1	1		(2-4'), CALICHE, dry, tan, well- consolidated, coarse, no stain, no odor.
D	<168	0	N		2	2	ССНЕ	
D	200	0	N		3	3		
D	264	0	N	PH04	4	4		

Total Depth: 4 feet



APPENDIX D

Photographic Log



Photographic Log WPX Energy Permian, LLC EP USA 3 nAB1622531873



Date & Time. Tue. Oct 04, 2022, 09.38.14 MDT
Position: +032.010366' /-103.947840" (±107.9ft)
Altitude: 2905ft (±19.7ft)
Datum. WGS-94
Azimuth:Bearing: 240" 550W 4267mits True: ± (\$9)
Elevation Angle: -01.2
Zoom 0.5.6
p*02

Photograph 1 Date: 10/04/2022

Description: Pothole Sampling (PH01)

View: Facing South

Photograph 2 Date: 10/04/2022

Description: Pothole Sampling (PH02)

View: Facing West



Photograph 3 Date: 10/04/2022

View: Facing West

Description: Pothole Sampling (PH03)



Photograph 4 Date: 10/04/2022

Description: Pothole Sampling (PH04)

View: Facing South



Photographic Log WPX Energy Permian, LLC EP USA 3 nAB1622531873





Photograph 5
Description: Excavation

cription: Excavation
: Facing Southwest

Photograph 6

Description: Excavation

Description: Excavation

View: Facing South

) Bearing 104 576E 1849mils Fuel 1 2



Photograph 7
Description: Excavation
View: Facing North

Date: 10/31/2022

Date: 10/26/2022

Photograph 8
Description: Excavation
View: Facing Northwest

Detection (405.010480" / =109.948060" (±16.41")
Altitude, 28991 (±31.27")
Datum, WIS-84
Azimuth Veering, 208 (N92W 9891 mile Tirus (±18")
Elevation Angle, +101.9"
Zoom, 0.5X
execution

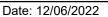
Date: 10/31/2022

Date: 10/31/2022



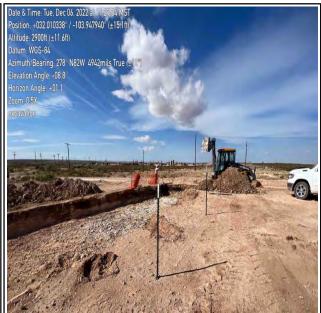
Photographic Log WPX Energy Permian, LLC EP USA 3 nAB1622531873





Date: 12/06/2022

Description: Additional Excavation **Facing Southwest**



Date: 12/06/2022 Photograph 10 Description: Additional Excavation

Facing West



Photograph 11 Description: Additional Excavation

View: **Facing Southwest**



Date: 12/06/2022

Photograph 12

Description: Additional Excavation

View: Facing West



APPENDIX E

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: 890-3138-1

Laboratory Sample Delivery Group: 03A1987053

Client Project/Site: EP USA 3

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Devon Team

RAMER

Authorized for release by: 10/13/2022 11:07:52 AM

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: EP USA 3
Laboratory Job ID: 890-3138-1
SDG: 03A1987053

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	6
QC Sample Results	7
QC Association Summary	11
Lab Chronicle	13
Certification Summary	14
Method Summary	15
Sample Summary	16
Chain of Custody	17
Receipt Checklists	18

$\boldsymbol{\wedge}$	
9	

K

Definitions/Glossary

Job ID: 890-3138-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

Qualifiers

GC VOA 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**

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

HPLC/IC

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

Glossary

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

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

DFR Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

Decision Level Concentration (Radiochemistry) DLC

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

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Eurofins Carlsbad

Case Narrative

Client: Ensolum Job ID: 890-3138-1 Project/Site: EP USA 3 SDG: 03A1987053

Job ID: 890-3138-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3138-1

Receipt

The sample was received on 10/4/2022 3:18 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.4°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: PH03 (890-3138-1).

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-36292 and analytical batch 880-36222 was outside the upper control limits.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: PH03 (890-3138-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

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

Matrix: Solid

Lab Sample ID: 890-3138-1

Client Sample Results

Client: Ensolum Job ID: 890-3138-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: PH03

Date Collected: 10/04/22 10:50 Date Received: 10/04/22 15:18

Sample Depth: 2'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/11/22 16:29	10/12/22 17:46	1
Toluene	< 0.00199	U	0.00199		mg/Kg		10/11/22 16:29	10/12/22 17:46	
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		10/11/22 16:29	10/12/22 17:46	
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/11/22 16:29	10/12/22 17:46	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		10/11/22 16:29	10/12/22 17:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/11/22 16:29	10/12/22 17:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				10/11/22 16:29	10/12/22 17:46	1
1,4-Difluorobenzene (Surr)	108		70 - 130				10/11/22 16:29	10/12/22 17:46	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese	al Pango Organ	ice (DPO) (00)						
	•		•						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	•		•	MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 10/07/22 10:14	
Analyte Total TPH	71.9	Qualifier	RL 49.9	MDL		<u>D</u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - Die:	Result 71.9	Qualifier	RL 49.9			<u>D</u>	Prepared Prepared		1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result 71.9	Qualifier nics (DRO) Qualifier	RL 49.9 (GC)		mg/Kg	=	<u> </u>	10/07/22 10:14	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 71.9 sel Range Orga	Qualifier nics (DRO) Qualifier	(GC)		mg/Kg	=	Prepared	10/07/22 10:14 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result 71.9 sel Range Orga Result <49.9	Qualifier nics (DRO) Qualifier U	(GC) RL 49.9		mg/Kg Unit mg/Kg	=	Prepared 10/06/22 15:51	10/07/22 10:14 Analyzed 10/07/22 04:52	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result 71.9 sel Range Orga Result <49.9 71.9	Qualifier nics (DRO) Qualifier U	RL 49.9 (GC) RL 49.9 49.9		mg/Kg Unit mg/Kg mg/Kg	=	Prepared 10/06/22 15:51 10/06/22 15:51	10/07/22 10:14 Analyzed 10/07/22 04:52 10/07/22 04:52	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result 71.9 sel Range Orga Result <49.9 71.9	Qualifier nics (DRO) Qualifier U	RL 49.9 (GC) RL 49.9 49.9 49.9		mg/Kg Unit mg/Kg mg/Kg	=	Prepared 10/06/22 15:51 10/06/22 15:51	Analyzed 10/07/22 04:52 10/07/22 04:52	Dil Face
Analyte Total TPH Method: SW846 8015B NM - Die: 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 nics (DRO) Qualifier U	RL 49.9 (GC) RL 49.9 49.9 49.9 Limits		mg/Kg Unit mg/Kg mg/Kg	=	Prepared 10/06/22 15:51 10/06/22 15:51 10/06/22 15:51 Prepared	Analyzed 10/07/22 10:14 Analyzed 10/07/22 04:52 10/07/22 04:52 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier nics (DRO) Qualifier U Qualifier S1-	RL 49.9 (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130		mg/Kg Unit mg/Kg mg/Kg	=	Prepared 10/06/22 15:51 10/06/22 15:51 10/06/22 15:51 Prepared 10/06/22 15:51	10/07/22 10:14 Analyzed 10/07/22 04:52 10/07/22 04:52 10/07/22 04:52 Analyzed 10/07/22 04:52	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Diese 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 nics (DRO) Qualifier U Qualifier S1-	RL 49.9 (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	MDL	mg/Kg Unit mg/Kg mg/Kg	=	Prepared 10/06/22 15:51 10/06/22 15:51 10/06/22 15:51 Prepared 10/06/22 15:51	10/07/22 10:14 Analyzed 10/07/22 04:52 10/07/22 04:52 10/07/22 04:52 Analyzed 10/07/22 04:52	Dil Face Dil Face Dil Face Dil Face Dil Face Dil Face

Eurofins Carlsbad

Surrogate Summary

Client: Ensolum Job ID: 890-3138-1 Project/Site: EP USA 3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

•				Percent Surrogate Re
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-20232-A-1-A MS	Matrix Spike	99	107	
880-20232-A-1-B MSD	Matrix Spike Duplicate	77	109	
890-3138-1	PH03	98	108	
LCS 880-36699/1-A	Lab Control Sample	100	97	
LCSD 880-36699/2-A	Lab Control Sample Dup	103	104	
MB 880-36699/5-A	Method Blank	90	112	
Surrogate Legend				
BFB = 4-Bromofluoroben	zene (Surr)			
DFBZ = 1,4-Difluorobenz	ene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limit
		1CO1	OTPH1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-3138-1	PH03	79	69 S1-	
90-3143-A-1-C MS	Matrix Spike	84	70	
90-3143-A-1-D MSD	Matrix Spike Duplicate	87	72	
.CS 880-36292/2-A	Lab Control Sample	95	92	
.CSD 880-36292/3-A	Lab Control Sample Dup	94	90	
/IB 880-36292/1-A	Method Blank	11 S1-	13 S1-	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3138-1 SDG: 03A1987053 Project/Site: EP USA 3

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-36699/5-A

Matrix: Solid Analysis Batch: 36717 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 36699

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/11/22 16:29	10/12/22 11:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/11/22 16:29	10/12/22 11:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/11/22 16:29	10/12/22 11:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/11/22 16:29	10/12/22 11:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/11/22 16:29	10/12/22 11:29	1
Xylenes, Total	< 0.00400	U	0.00400		mg/Kg		10/11/22 16:29	10/12/22 11:29	1

MB MB

Surrogate	%Recovery Qualific	er Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90	70 - 130	10/11/22 16:29	10/12/22 11:29	1
1,4-Difluorobenzene (Surr)	112	70 - 130	10/11/22 16:29	10/12/22 11:29	1

Lab Sample ID: LCS 880-36699/1-A

Matrix: Solid

Analysis Batch: 36717

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 36699

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08151		mg/Kg		82	70 - 130	
Toluene	0.100	0.08917		mg/Kg		89	70 - 130	
Ethylbenzene	0.100	0.07884		mg/Kg		79	70 - 130	
m-Xylene & p-Xylene	0.200	0.1575		mg/Kg		79	70 - 130	
o-Xylene	0.100	0.07833		mg/Kg		78	70 - 130	

LCS LCS

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

Lab Sample ID: LCSD 880-36699/2-A

Matrix: Solid

Analysis Batch: 36717

Client Sample ID: Lab Control Sample Dup	Client Sam	ple ID: Lab	Control Sam	ple Dup
--	------------	-------------	--------------------	---------

Prep Type: Total/NA

Prep Batch: 36699

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09035		mg/Kg		90	70 - 130	10	35
Toluene	0.100	0.09725		mg/Kg		97	70 - 130	9	35
Ethylbenzene	0.100	0.08683		mg/Kg		87	70 - 130	10	35
m-Xylene & p-Xylene	0.200	0.1722		mg/Kg		86	70 - 130	9	35
o-Xylene	0.100	0.08568		mg/Kg		86	70 - 130	9	35

LCSD LCSD

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

Lab Sample ID: 880-20232-A-1-A MS

Released to Imaging: 5/17/2023 8:58:09 AM

Matrix: Solid

Analysis Batch: 36717

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

Prep Batch: 36699

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.100	0.09214		mg/Kg		92	70 - 130	
Toluene	< 0.00201	U F1	0.100	0.09307		mg/Kg		93	70 - 130	

Prep Batch: 36699

Prep Type: Total/NA

Prep Batch: 36292

QC Sample Results

Job ID: 890-3138-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: 880-20232-A-1-A MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid Analysis Batch: 36717

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits D <0.00201 U F1 F2 0.100 0.07772 77 70 - 130 Ethylbenzene mg/Kg <0.00402 U F1 F2 m-Xylene & p-Xylene 0.201 0.1563 mg/Kg 78 70 - 130 <0.00201 U F1 F2 0.100 0.07596 75 70 - 130 o-Xylene mg/Kg

MS MS Surrogate Qualifier Limits %Recovery 70 - 130 4-Bromofluorobenzene (Surr) 99 1,4-Difluorobenzene (Surr) 107 70 - 130

Lab Sample ID: 880-20232-A-1-B MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 36717

Prep Batch: 36699 Sample Sample Spike MSD MSD RPD Result Qualifier %Rec RPD Limit Added Result Qualifier Limits Analyte Unit Benzene <0.00201 U 0.0998 0.07929 mg/Kg 79 70 - 130 15 35 Toluene <0.00201 UF1 0.0998 0.06564 F1 mg/Kg 66 70 - 130 35 35 <0.00201 UF1F2 0.0998 0.05281 F1 F2 53 70 - 130 38 35 Ethylbenzene mg/Kg 47 m-Xylene & p-Xylene <0.00402 U F1 F2 0.200 0.09464 F1 F2 mg/Kg 70 - 130 49 35 70 - 130 0.0998 0.04674 F1 F2 46 o-Xylene <0.00201 U F1 F2 mg/Kg 48 35

MSD MSD Qualifier Limits Surrogate %Recovery 4-Bromofluorobenzene (Surr) 77 70 - 130 1,4-Difluorobenzene (Surr) 109 70 - 130

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

Lab Sample ID: MB 880-36292/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 36222

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/22 15:51	10/06/22 19:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 15:51	10/06/22 19:28	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 15:51	10/06/22 19:28	1

MB MB %Recovery Dil Fac Qualifier Limits Prepared Analyzed Surrogate 10/06/22 15:51 1-Chlorooctane 11 S1-70 - 130 10/06/22 19:28 13 S1-70 - 130 10/06/22 15:51 10/06/22 19:28 o-Terphenyl

Lab Sample ID: LCS 880-36292/2-A Client Sample ID: Lab Control Sample

Analysis Batch: 36222

Matrix: Solid

LCS LCS %Rec Spike Analyte Added Result Qualifier Unit %Rec Limits 1000 95 954 5 70 _ 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 872.9 mg/Kg 87 70 - 130

C10-C28)

Eurofins Carlsbad

Prep Type: Total/NA

Prep Batch: 36292

Job ID: 890-3138-1

SDG: 03A1987053

Project/Site: EP USA 3

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

LCS LCS

Sample Sample

Lab Sample ID: LCS 880-36292/2-A Client Sample ID: Lab Control Sample

Limits

Matrix: Solid

Client: Ensolum

Analysis Batch: 36222

Prep Type: Total/NA

Prep Batch: 36292

Surrogate %Recovery Qualifier

1-Chlorooctane 95 70 - 130 o-Terphenyl 92 70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 36292

Lab Sample ID: LCSD 880-36292/3-A **Matrix: Solid**

Analysis Batch: 36222

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	937.8		mg/Kg		94	70 - 130	2	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	848.7		mg/Kg		85	70 - 130	3	20
C10-C28)									

LCSD LCSD

Surrogate %Recovery Qualifier Limits 94 70 - 130 1-Chlorooctane o-Terphenyl 90 70 - 130

Lab Sample ID: 890-3143-A-1-C MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 36222

Prep Type: Total/NA

Prep Batch: 36292

	Sample	Sample	Spike	IVIO	IVIO				/onec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1052		mg/Kg		103	70 - 130	
Diesel Range Organics (Over	<50.0	U	998	799.9		mg/Kg		80	70 - 130	

Snike

C10-C28)

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

Lab Sample ID: 890-3143-A-1-D MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 36222

Diesel Range Organics (Over

Prep Batch: 36292 MSD MSD RPD Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit Gasoline Range Organics <50.0 U 999 1090 107 20 mg/Kg 70 - 130 (GRO)-C6-C10

830.8

mg/Kg

83

70 - 130

999

C10-C28)

	MSD MSD	
Surrogate	%Recovery Qualifier	r Limits
1-Chlorooctane	87	70 - 130
o-Terphenyl	72	70 - 130

<50.0 U

Eurofins Carlsbad

20

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Job ID: 890-3138-1 SDG: 03A1987053

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-36234/1-A

Matrix: Solid

Analysis Batch: 36484

Client: Ensolum

Project/Site: EP USA 3

мв мв

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 10/08/22 08:23

Lab Sample ID: LCS 880-36234/2-A

Matrix: Solid

Analysis Batch: 36484

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 274.4 mg/Kg 110 90 - 110

Lab Sample ID: LCSD 880-36234/3-A

Matrix: Solid

Analysis Batch: 36484

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 266.3 mg/Kg 107 90 - 110

Lab Sample ID: 880-19976-A-1-C MS

Matrix: Solid

Analysis Batch: 36484

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added %Rec Result Qualifier Unit Limits Chloride 460 249 706.4 90 - 110 mg/Kg

Lab Sample ID: 880-19976-A-1-D MSD

Matrix: Solid

Analysis Batch: 36484

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit 249 Chloride 460 707.4 mg/Kg 99 90 - 110 0 20

 Client: Ensolum
 Job ID: 890-3138-1

 Project/Site: EP USA 3
 SDG: 03A1987053

GC VOA

Prep Batch: 36699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3138-1	PH03	Total/NA	Solid	5035	
MB 880-36699/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36699/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36699/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20232-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-20232-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 36717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3138-1	PH03	Total/NA	Solid	8021B	36699
MB 880-36699/5-A	Method Blank	Total/NA	Solid	8021B	36699
LCS 880-36699/1-A	Lab Control Sample	Total/NA	Solid	8021B	36699
LCSD 880-36699/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36699
880-20232-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	36699
880-20232-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	36699

Analysis Batch: 36873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3138-1	PH03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 36222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3138-1	PH03	Total/NA	Solid	8015B NM	36292
MB 880-36292/1-A	Method Blank	Total/NA	Solid	8015B NM	36292
LCS 880-36292/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	36292
LCSD 880-36292/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	36292
890-3143-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	36292
890-3143-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	36292

Prep Batch: 36292

Lab Sample ID 890-3138-1	Client Sample ID PH03	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-36292/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-36292/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-36292/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3143-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3143-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 36365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3138-1	PH03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 36234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3138-1	PH03	Soluble	Solid	DI Leach	
MB 880-36234/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-36234/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-36234/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Eurofins Carlsbad

Page 11 of 19

2

5

7

_

1 1

12

| 4

 Client: Ensolum
 Job ID: 890-3138-1

 Project/Site: EP USA 3
 SDG: 03A1987053

HPLC/IC (Continued)

Leach Batch: 36234 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-19976-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-19976-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 36484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3138-1	PH03	Soluble	Solid	300.0	36234
MB 880-36234/1-A	Method Blank	Soluble	Solid	300.0	36234
LCS 880-36234/2-A	Lab Control Sample	Soluble	Solid	300.0	36234
LCSD 880-36234/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	36234
880-19976-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	36234
880-19976-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	36234

<u>ی</u>

5

7

8

3

11

13

14

Lab Chronicle

Client: Ensolum Job ID: 890-3138-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: PH03

Lab Sample ID: 890-3138-1

Matrix: Solid

Date Collected:	10/04/22 10:	50
Date Received:	10/04/22 15:	18

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	36699	10/11/22 16:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36717	10/12/22 17:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36873	10/13/22 11:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			36365	10/07/22 10:14	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	36292	10/06/22 15:51	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36222	10/07/22 04:52	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	36234	10/06/22 09:45	СН	EET MID
Soluble	Analysis	300.0		1			36484	10/08/22 09:17	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
 Job ID: 890-3138-1

 Project/Site: EP USA 3
 SDG: 03A1987053

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
,		ut the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes for wh
the agency does not of	ter certification.			
the agency does not of Analysis Method	fer certification. Prep Method	Matrix	Analyte	
,		Matrix Solid	Analyte Total TPH	

4

5

7

9

10

16

12

Method Summary

Job ID: 890-3138-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

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: EP USA 3

Job ID: 890-3138-1 SDG: 03A1987053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3138-1	PH03	Solid	10/04/22 10:50	10/04/22 15:18	2'

3

4

8

3

11

12

4 /

Project Manager:

Xenco

Environment Testing

Address: Company Name:

3122 National Parks HWY

Address:

5315 Buena Vista Dr.

Company Name: Bill to: (if different)

WPX

Jim Raley

Ensolum Ben Belill

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 Chain of Custody

Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Orger No:
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			City, State ZIP:		Carlsbad, NM 88220	ad, NA	/ 8822	°			кероп	ng: Leve	֧֓֞֟֟֝֟֝֟֝֟֝֟ ֖֖֖֪֪֓֞֞֓֞֞֞֩֞֞֓֞֩֞֞֩֞֞֩֞֞֩֞֞֩֞֩֞֩֞֩֞֩֞֡֓֓֡֩֡֡	.evel		1 2 1	2	Reporting: Level III PS///OSI TRKE Level IV
hone: 9	989-854-0852		Email:	Email: BBelill@Ensolum.com, jim.raley@dvn.com	lum.co	m, jim.	raley(@dvn	com			Deliver	Deliverables: EDD	8		ADar	ADaPI LL O	Other:	
roject Name:	EP USA 3		Turn	Turn Around						ANAL	ANALYSIS REQUEST	QUEST					Prese	rvative	Preservative Codes
oroject Number:	03A1987053	3	☑ Routine	Rush	Pres. Code						-		_		+		None: NO	0	DI Water: H ₂ O
oroject Location:	Eddy County, NM		Due Date:	5 Day TAT	ł												Cool: Cool	: <	MeOH: Me
sampler's Name:	Gilbert Moreno	no	TAT starts the	TAT starts the day received by					L	-	_		_	+			HCL: HC		HNO3: HN
)C #	1061155101	\supset	the lab, if rece	the lab, if received by 4:30pm	rs									,-	-	_	H2504: H2		NaOH: Na
SAMPLE RECEIPT	T Fomp Blank:	Yes No	Wet Ice:	Yes No	nete	.0)											H3PO4: HP		
Samples Received Intact:		Thermometer ID:		F00MM	ırar	300			_							_	NaHSO4: NABIS	ABIS	
Cooler Custody Seals:	Yes No (N/A	Correction Factor:	actor:	6.0-	Pa	PA:											Na ₂ S ₂ O ₃ : NaSO ₃	lasU ₃	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	Reading:	4-6		S (E			_	890-3138 Chain of	Chain o	f Custody	M. ICH.				Zn Acetate+NaOH: Zn	+NaOH:	Zn
otal Containers:		Corrected Temperature:	emperature:	2		IDE)15)	8021		_	•	.			1		NaOH+Ascorbic Acid: SAPC	orbic Ac	sid: SAPC
Sample Identification	fication Matrix	Date Sampled	Time Sampled	Depth Grab/	Grab/ # of Comp Cont	CHLOR	TPH (80	BTEX (Samp	ple Cor	Sample Comments
PH03	S	10.4.22	10:50	2' Grab/	1	×	×	×	-				1	+	+				
											1						Incid	dent Nu	Incident Numbers
									1								NA.	NAB1622531873	31873
		5									_				-				
		arin	3										_	-	-	-			
	\(\)	*											-	\vdash	-				
											-			-	-	+			
									-		-			-	-				
Total 200.7 / 6010	0 200.8 / 6020:	8	8RCRA 13PPM	PM Texas 11	1 Al Sb	Sb As	Ba Be	œ	са са	Cr Co C	Cu Fe Pb	ĕ Ø	Mn Mo Ni K	K Se	- >-	SiO2	Na Sr TI Sn U V Zn	n U <	Zn
ircle Method(s) and	Circle Method(s) and Metal(s) to be analyzed	zed	TCLP / SF	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo	℃RA	Sb A	s Ba	Be C	d Cr C	Cu Pb	Mn Mo	Ni Se Ag	Ag TI U		Hg	1631	Hg: 1631 / 245.1 / 7470 / /4/1	70 / /4	
otice: Signature of this do service. Eurofins Xenco	tottee: 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 services. A minimum charge of \$86.00 will be applied to each project and a charge of \$6 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	of samples con st of samples ar	stitutes a valid p nd shall not assu project and a ci	urchase order fro ime any responsil harge of \$5 for each	m client	company ny losse	to Eur	ofins Xe	nco, its affi incurred by Xenco, but	lates and su the client if s	bcontractor such losses These terr	 It assigns standard terms and conditions are due to circumstances beyond the contro ns will be enforced unless previously negotia 	s standard circumsta nforced un	terms ances bey	ind cond ond the viously n	itions control egotiate	ē.		
Relinquished by: (Signature)	(Signature)	Receive	Received by: (Signature	ture)		Date/Time	Time		Relin	Relinquished by: (Signat	y: (Signa	iture)	R	Received by: (Signature)	d by: (Signat	ure)	Da	Date/Time
(3/8m	2	TOP L	6		0	0.4.82	2/1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$											
			+						o i										
														١				200	כ חכמה שם מכחם כ

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3138-1 SDG Number: 03A1987053

Login Number: 3138 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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

1

2

3

4

6

8

10

4.0

13

14

Login Sample Receipt Checklist

Client: Ensolum Job Nu

Job Number: 890-3138-1 SDG Number: 03A1987053

Login Number: 3138

List Source: Eurofins Midland
List Number: 2

List Creation: 10/05/22 12:21 PM

Creator: Rodriguez, Leticia

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

_

Λ

5

7

9

11

13

14

<6mm (1/4").



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3139-1

Laboratory Sample Delivery Group: 03A1987053

Client Project/Site: EP USA 3

Revision: 1

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Devon Team

RAMPR

Authorized for release by: 10/17/2022 1:08:46 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: EP USA 3
Laboratory Job ID: 890-3139-1
SDG: 03A1987053

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	12
QC Sample Results	13
QC Association Summary	19
Lab Chronicle	22
Certification Summary	25
Method Summary	26
Sample Summary	27
Chain of Custody	28
Receipt Checklists	29

Definitions/Glossary

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

CFL Contains Free Liquid Colony Forming Unit **CFU** Contains No Free Liquid CNF **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)

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit PQL

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

Released to Imaging: 5/17/2023 8:58:09 AM

Case Narrative

Client: Ensolum Job ID: 890-3139-1
Project/Site: EP USA 3 SDG: 03A1987053

Job ID: 890-3139-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3139-1

REVISION

The report being provided is a revision of the original report sent on 10/12/2022. The report (revision 1) is being revised due to Per client email, requesting chloride data review..

Report revision history

Receipt

The samples were received on 10/4/2022 3:18 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.4°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3139-1), PH01 (890-3139-2), PH02 (890-3139-3), PH02 (890-3139-4), PH03 (890-3139-5), PH03 (890-3139-6), PH04 (890-3139-7) and PH04 (890-3139-8).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-36589 and analytical batch 880-36716 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 sample was outside control limits: (LCS 880-36849/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-20328-A-1-B MS) and (880-20328-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-36234 and analytical batch 880-36484 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Eurofins Carlsbad 10/17/2022 (Rev. 1)

Client Sample Results

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: PH01 Lab Sample ID: 890-3139-1

Date Collected: 10/04/22 10:00 Matrix: Solid Date Received: 10/04/22 15:18

Sample Depth: 0.5'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 11:53	1
Toluene	<0.00200	U F1	0.00200		mg/Kg		10/10/22 13:30	10/12/22 11:53	1
Ethylbenzene	<0.00200	U F1	0.00200		mg/Kg		10/10/22 13:30	10/12/22 11:53	1
m-Xylene & p-Xylene	<0.00401	U F1	0.00401		mg/Kg		10/10/22 13:30	10/12/22 11:53	1
o-Xylene	<0.00200	U F1	0.00200		mg/Kg		10/10/22 13:30	10/12/22 11:53	1
Xylenes, Total	<0.00401	U F1	0.00401		mg/Kg		10/10/22 13:30	10/12/22 11:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130				10/10/22 13:30	10/12/22 11:53	1
1,4-Difluorobenzene (Surr)	93		70 - 130				10/10/22 13:30	10/12/22 11:53	1
Method: TAL SOP Total BTEX	(- Total BTE	X Calculat	ion						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			10/12/22 14:00	1
- 									
Method: SW846 8015 NM - Di	esel Range (Organics (DRO) (GC)						
Method: SW846 8015 NM - Di Analyte		Organics (Qualifier	DRO) (GC) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
		Qualifier		MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 10/07/22 09:09	Dil Fac
Analyte	<50.0	Qualifier U	RL 50.0	MDL		<u> </u>	Prepared		
Analyte Total TPH	Result <50.0	Qualifier U	RL 50.0			<u>D</u>	Prepared Prepared		
Analyte Total TPH Method: SW846 8015B NM - E	Result <50.0	Qualifier U Organics Qualifier	RL 50.0 (DRO) (GC)		mg/Kg		<u> </u>	10/07/22 09:09	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.0 Diesel Range Result	Qualifier U Organics Qualifier U	RL		mg/Kg Unit		Prepared	10/07/22 09:09 Analyzed 10/06/22 13:09	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10	Result <50.0 Diesel Range Result <50.0	Qualifier U Organics Qualifier U	RL 50.0 (DRO) (GC) RL 50.0		mg/Kg Unit mg/Kg		Prepared 10/06/22 08:40 10/06/22 08:40	10/07/22 09:09 Analyzed 10/06/22 13:09	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - December 19 PM - December 19 P	Result <50.0 Diesel Range Result <50.0 <50.0	Qualifier U Organics Qualifier U U	RL 50.0 (DRO) (GC) RL 50.0		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/06/22 08:40 10/06/22 08:40	Analyzed 10/06/22 13:09	1
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.0	Qualifier U Organics Qualifier U U	RL 50.0 (DRO) (GC) RL 50.0 50.0		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/06/22 08:40 10/06/22 08:40 10/06/22 08:40	Analyzed 10/06/22 13:09 10/06/22 13:09	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <50.0	Qualifier U Organics Qualifier U U	RL 50.0 (DRO) (GC) RL 50.0 50.0 Limits		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/06/22 08:40 10/06/22 08:40 10/06/22 08:40 Prepared	Analyzed 10/06/22 13:09 10/06/22 13:09 10/06/22 13:09 Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <50.0	Qualifier U Organics Qualifier U U U Qualifier	RL 50.0 (DRO) (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/06/22 08:40 10/06/22 08:40 10/06/22 08:40 Prepared 10/06/22 08:40	Analyzed 10/06/22 13:09 10/06/22 13:09 10/06/22 13:09 Analyzed 10/06/22 13:09	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U Organics Qualifier U U U Qualifier	RL 50.0 (DRO) (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	MDL	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/06/22 08:40 10/06/22 08:40 10/06/22 08:40 Prepared 10/06/22 08:40	Analyzed 10/06/22 13:09 10/06/22 13:09 10/06/22 13:09 Analyzed 10/06/22 13:09	1 Dil Fac

Client Sample ID: PH01 Lab Sample ID: 890-3139-2 Date Collected: 10/04/22 10:10 **Matrix: Solid**

Date Received: 10/04/22 15:18

Sample Depth: 4'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:30	10/12/22 12:13	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:30	10/12/22 12:13	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:30	10/12/22 12:13	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/10/22 13:30	10/12/22 12:13	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:30	10/12/22 12:13	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/10/22 13:30	10/12/22 12:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130				10/10/22 13:30	10/12/22 12:13	1

Job ID: 890-3139-1 SDG: 03A1987053

Client: Ensolum
Project/Site: EP USA 3
SDG: 0

Client Sample ID: PH01 Lab Sample ID: 890-3139-2

Date Collected: 10/04/22 10:10

Date Received: 10/04/22 15:18

Matrix: Solid

Sample Depth: 4'

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

Surrogate	%Recovery Qualifier	Limits	Prepared Analyzed	Dil Fac
1 4-Difluorobenzene (Surr)	92	70 - 130	10/10/22 13:30 10/12/22 12:13	

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg	_		10/12/22 14:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D)	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg				10/07/22 09:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/06/22 08:40	10/06/22 13:29	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/06/22 08:40	10/06/22 13:29	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/06/22 08:40	10/06/22 13:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	10/06/22 08:40	10/06/22 13:29	1
o-Terphenyl	114		70 - 130	10/06/22 08:40	10/06/22 13:29	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53.4		4.95	mg/Kg			10/13/22 18:19	1

Client Sample ID: PH02

Date Collected: 10/04/22 10:20

Lab Sample ID: 890-3139-3

Matrix: Solid

Date Collected: 10/04/22 10:20 Date Received: 10/04/22 15:18

Sample Depth: 0.5'

Method: SW846 8021B -	Volatile Organic	Compounds (GC)
INICITION. SYVOTO OUZ ID -	Voiatile Organic	

Michiga. Offoro our ID - Vo	matthe Organic	Compoun	us (00 <i>)</i>						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 12:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 12:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 12:34	1
m-Xylene & p-Xylene	< 0.00399	U	0.00399		mg/Kg		10/10/22 13:30	10/12/22 12:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 12:34	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/10/22 13:30	10/12/22 12:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				10/10/22 13:30	10/12/22 12:34	1
1 4-Diffuorobenzene (Surr)	88		70 130				10/10/22 13:30	10/12/22 12:34	1

l Method: TΔI	SOP Total BTFX	- Total RTFX	Calculation

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/12/22 14:00	1

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

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	496	49.9	mg/Kg		_	10/07/22 09:09	1

Eurofins Carlsbad

2

3

4

6

9

13

Client Sample Results

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: PH02

Date Collected: 10/04/22 10:20 Date Received: 10/04/22 15:18

Sample Depth: 0.5'

Lab Sample ID: 890-3139-3 **Matrix: Solid**

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier Dil Fac RL **MDL** Unit Prepared Analyzed <49.9 U 49.9 10/06/22 08:40 10/06/22 12:08 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 10/06/22 08:40 10/06/22 12:08 49.9 mg/Kg 138 C10-C28) Oll Range Organics (Over C28-C36) 10/06/22 08:40 10/06/22 12:08 358 49.9 mg/Kg %Recovery Qualifier Limits Prepared Dil Fac Surrogate Analyzed 1-Chlorooctane 70 - 130 10/06/22 08:40 10/06/22 12:08 95 10/06/22 08:40 10/06/22 12:08 o-Terphenyl 88 70 - 130

Method: MCAWW 300.0 - Anion	ns, Ion Chr	omatograp	hy - Soluble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	95.6		5.00		mg/Kg			10/13/22 18:24	1

Client Sample ID: PH02 Lab Sample ID: 890-3139-4 Date Collected: 10/04/22 10:30 **Matrix: Solid**

Date Received: 10/04/22 15:18

Sample Depth: 4'

Method: SW846 8021B - Volati	le Organic	Compound	ds (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 12:54	1
Toluene	< 0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 12:54	1
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 12:54	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/10/22 13:30	10/12/22 12:54	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 12:54	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/10/22 13:30	10/12/22 12:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130				10/10/22 13:30	10/12/22 12:54	1
1,4-Difluorobenzene (Surr)	86		70 - 130				10/10/22 13:30	10/12/22 12:54	1
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/12/22 14:00	1
	sel Range (Organics (DRO) (GC)						
Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	II							
		O	50.0		mg/Kg			10/07/22 09:09	1
- Method: SW846 8015B NM - Di	iosol Range				mg/Kg			10/07/22 09:09	1
		o Organics	(DRO) (GC)	MDL		D	Prepared		
Analyte Gasoline Range Organics		Organics Qualifier		MDL		<u>D</u>	Prepared 10/06/22 08:40	Analyzed 10/06/22 13:50	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Organics Qualifier	(DRO) (GC)	MDL	Unit	<u>D</u>		Analyzed	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0	e Organics Qualifier U	(DRO) (GC) RL 50.0	MDL	Unit mg/Kg	<u> </u>	10/06/22 08:40	Analyzed 10/06/22 13:50	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<50.0 <50.0	e Organics Qualifier U	5 (DRO) (GC) RL 50.0	MDL	Unit mg/Kg mg/Kg	<u>D</u>	10/06/22 08:40 10/06/22 08:40	Analyzed 10/06/22 13:50 10/06/22 13:50	Dil Fac
Method: SW846 8015B NM - Di 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 <50.0 <50.0	e Organics Qualifier U	5 (DRO) (GC) RL 50.0 50.0	MDL	Unit mg/Kg mg/Kg	<u>D</u>	10/06/22 08:40 10/06/22 08:40 10/06/22 08:40	Analyzed 10/06/22 13:50 10/06/22 13:50 10/06/22 13:50	1 1

Matrix: Solid

Client Sample Results

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: PH02

Lab Sample ID: 890-3139-4 Date Collected: 10/04/22 10:30 Date Received: 10/04/22 15:18

Sample Depth: 4'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac 4.99 10/13/22 18:29 Chloride 55.5 mg/Kg

Client Sample ID: PH03 Lab Sample ID: 890-3139-5 **Matrix: Solid**

Date Collected: 10/04/22 10:40 Date Received: 10/04/22 15:18

Sample Depth: 0.5'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 13:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 13:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 13:15	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/10/22 13:30	10/12/22 13:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 13:15	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/10/22 13:30	10/12/22 13:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130				10/10/22 13:30	10/12/22 13:15	1
1.4-Difluorobenzene (Surr)	84		70 - 130				10/10/22 13:30	10/12/22 13:15	1

Method: TAL SOP Total BTEX - Total BTEX Calculation								
Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			10/12/22 14:00	1

Method: SW846 8015 NM - Dies	sel Range Organics (Di	RO) (GC)					
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	771	49.9	mg/Kg			10/07/22 09:09	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/06/22 08:40	10/06/22 12:28	1
Diesel Range Organics (Over C10-C28)	202		49.9		mg/Kg		10/06/22 08:40	10/06/22 12:28	1
Oll Range Organics (Over C28-C36)	569		49.9		mg/Kg		10/06/22 08:40	10/06/22 12:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130				10/06/22 08:40	10/06/22 12:28	1
o-Terphenyl	93		70 - 130				10/06/22 08:40	10/06/22 12:28	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	304		5.04		mg/Kg			10/13/22 18:34	1

Matrix: Solid

Lab Sample ID: 890-3139-6

10/06/22 08:40 10/06/22 14:10

Client Sample Results

 Client: Ensolum
 Job ID: 890-3139-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Client Sample ID: PH03

Date Collected: 10/04/22 11:00 Date Received: 10/04/22 15:18

Sample Depth: 4'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 13:36	1
Toluene	< 0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 13:36	1
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 13:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/10/22 13:30	10/12/22 13:36	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 13:36	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/10/22 13:30	10/12/22 13:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130				10/10/22 13:30	10/12/22 13:36	1
1,4-Difluorobenzene (Surr)	78		70 - 130				10/10/22 13:30	10/12/22 13:36	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/12/22 14:00	1
Method: SW846 8015 NM - Die	sel Range (Organics (DRO) (GC)						

Method. Offorto ou to Mili - Dies	ei italige Organics (b	/ICO) (GG)					
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg			10/07/22 09:09	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 14:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 14:10	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 14:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130				10/06/22 08:40	10/06/22 14:10	1

Method: MCAWW 300.0 - Anio	ns, Ion Chr	omatograp	hy - Soluble							
Analyte	Result	Qualifier	RL	MDL (Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	430		4.97		ma/Ka			10/13/22 18:48	1	

70 - 130

Client Sample ID: PH04

Date Collected: 10/04/22 11:10

Lab Sample ID: 890-3139-7

Matrix: Solid

Date Received: 10/04/22 15:18

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

Sample Depth: 0.5'

o-Terphenyl

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 13:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 13:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 13:56	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/10/22 13:30	10/12/22 13:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 13:56	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/10/22 13:30	10/12/22 13:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130				10/10/22 13:30	10/12/22 13:56	1

Eurofins Carlsbad

1

3

5

-

0

10

12

13

Job ID: 890-3139-1 SDG: 03A1987053

Client: Ensolum
Project/Site: EP USA 3
SDC

Client Sample ID: PH04

Lab Sample ID: 890-3139-7

Date Collected: 10/04/22 11:10 Matrix: Solid
Date Received: 10/04/22 15:18

Sample Depth: 0.5'

Surrogate	%Recovery Qualifier	Limits	Prepared Analyz	zed Dil Fac
1.4-Difluorobenzene (Surr)	92	70 - 130	10/10/22 13:30 10/12/22	13:56

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00399	U	0.00399	mg/Kg		_	10/12/22 14:00	1

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

Analyte	Result Qualifie	er RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9 U	49.9	mg/Kg			10/07/22 09:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/06/22 08:40	10/06/22 12:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/06/22 08:40	10/06/22 12:48	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/06/22 08:40	10/06/22 12:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	10/06/22 08:40	10/06/22 12:48	1
o-Terphenyl	90		70 - 130	10/06/22 08:40	10/06/22 12:48	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	102		5.00		mg/Kg			10/13/22 18:53	1

Client Sample ID: PH04

Date Collected: 10/04/22 11:20

Lab Sample ID: 890-3139-8

Matrix: Solid

Date Collected: 10/04/22 11:20 Date Received: 10/04/22 15:18

Released to Imaging: 5/17/2023 8:58:09 AM

Sample Depth: 4'

Method: SW846 8021B -	Volatile Organic	Compounds (GC)
INICITION. SYVOTO OUZ ID -	Voiatile Organic	

mothod: Offoro COLID	voiding organic	Compoun	uo (00)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 14:17	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 14:17	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 14:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/10/22 13:30	10/12/22 14:17	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:30	10/12/22 14:17	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/10/22 13:30	10/12/22 14:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130				10/10/22 13:30	10/12/22 14:17	1
1,4-Difluorobenzene (Surr)	95		70 - 130				10/10/22 13:30	10/12/22 14:17	1

Method: TAL SOP Total BTFX - Total BTI	EV Calculation

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/12/22 14:00	1

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

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9 U	49.9	mg/Kg			10/07/22 09:09	1

Client Sample Results

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: PH04 Lab Sample ID: 890-3139-8 Date Collected: 10/04/22 11:20

Matrix: Solid

Date Received: 10/04/22 15:18 Sample Depth: 4'

Method: SW846 8015B NM - D	iesel Range	Organics	(DRO) (GC)					
Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/06/22 08:40	10/06/22 14:30	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/06/22 08:40	10/06/22 14:30	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/06/22 08:40	10/06/22 14:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130			10/06/22 08:40	10/06/22 14:30	1
o-Terphenyl	99		70 - 130			10/06/22 08:40	10/06/22 14:30	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	466		5.01		mg/Kg			10/13/22 18:58	1

Surrogate Summary

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	covery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	70-130)	
890-3139-1	PH01	95	93	
890-3139-1 MS	PH01	99	104	
890-3139-1 MSD	PH01	100	101	
890-3139-2	PH01	105	92	
890-3139-3	PH02	111	88	
890-3139-4	PH02	87	86	
890-3139-5	PH03	106	84	
890-3139-6	PH03	104	78	
890-3139-7	PH04	96	92	
890-3139-8	PH04	101	95	
LCS 880-36589/1-A	Lab Control Sample	115	100	
LCSD 880-36589/2-A	Lab Control Sample Dup	90	106	
MB 880-36589/5-A	Method Blank	90	94	

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	rrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-20033-A-1-C MS	Matrix Spike	94	85	
880-20033-A-1-D MSD	Matrix Spike Duplicate	82	71	
880-20328-A-1-B MS	Matrix Spike	197 S1+	189 S1+	
880-20328-A-1-C MSD	Matrix Spike Duplicate	192 S1+	186 S1+	
890-3139-1	PH01	99	94	
890-3139-2	PH01	111	114	
890-3139-3	PH02	95	88	
890-3139-4	PH02	88	85	
890-3139-5	PH03	95	93	
890-3139-6	PH03	98	93	
890-3139-7	PH04	97	90	
890-3139-8	PH04	101	99	
LCS 880-36226/2-A	Lab Control Sample	108	110	
LCS 880-36849/2-A	Lab Control Sample	69 S1-	86	
LCSD 880-36226/3-A	Lab Control Sample Dup	116	120	
LCSD 880-36849/3-A	Lab Control Sample Dup	82	97	
MB 880-36226/1-A	Method Blank	90	93	
MB 880-36849/1-A	Method Blank	121	130	

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-36589/5-A

Lab Sample ID: LCS 880-36589/1-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 36716

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 36589

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 11:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 11:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 11:31	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/10/22 13:30	10/12/22 11:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:30	10/12/22 11:31	1
Xylenes Total	< 0.00400	U	0.00400		ma/Ka		10/10/22 13:30	10/12/22 11:31	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed
4-Bromofluorobenzene (Surr)	90		70 - 130	10/10/22 13:30	10/12/22 11:31
1,4-Difluorobenzene (Surr)	94		70 - 130	10/10/22 13:30	10/12/22 11:31

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 36589

Prep Type: Total/NA

Prep Batch: 36589

Analysis Batch: 36716 Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Benzene 70 - 130 0.100 0.09914 mg/Kg 99 Toluene 0.100 0.09874 mg/Kg 70 - 130 99 Ethylbenzene 0.100 0.1009 mg/Kg 101 70 - 130 0.200 m-Xylene & p-Xylene 0.2205 mg/Kg 110 70 - 130 o-Xylene 0.100 0.1260 mg/Kg 126 70 - 130

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 36716

Lab Sample ID: LCSD 880-36589/2-A

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1019		mg/Kg		102	70 - 130	3	35
Toluene	0.100	0.09047		mg/Kg		90	70 - 130	9	35
Ethylbenzene	0.100	0.08621		mg/Kg		86	70 - 130	16	35
m-Xylene & p-Xylene	0.200	0.1774		mg/Kg		89	70 - 130	22	35
o-Xylene	0.100	0.09931		mg/Kg		99	70 - 130	24	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	90	70 - 130
1,4-Difluorobenzene (Surr)	106	70 - 130

Lab Sample ID: 890-313

Matrix: Solid

Analysis Batch: 36716

139-1 MS	Client Sample ID: PH01
	Prep Type: Total/NA
6	Prep Batch: 36589

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0996	0.08875		mg/Kg	_	89	70 - 130	
Toluene	< 0.00200	U F1	0.0996	0.06903	F1	mg/Kg		69	70 - 130	

Eurofins Carlsbad

Dil Fac

QC Sample Results

Client: Ensolum Job ID: 890-3139-1
Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: 890-3139-1 MS

Matrix: Solid

Analysis Batch: 36716

Sample Samp

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00200	U F1	0.0996	0.06233	F1	mg/Kg		63	70 - 130	
m-Xylene & p-Xylene	<0.00401	U F1	0.199	0.1260	F1	mg/Kg		63	70 - 130	
o-Xylene	<0.00200	U F1	0.0996	0.07216		mg/Kg		72	70 - 130	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 890-3139-1 MSD

Matrix: Solid
Analysis Batch: 36716

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 36589

	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	0.08393		mg/Kg		84	70 - 130	6	35
Toluene	<0.00200	U F1	0.0998	0.06550	F1	mg/Kg		66	70 - 130	5	35
Ethylbenzene	<0.00200	U F1	0.0998	0.05425	F1	mg/Kg		54	70 - 130	14	35
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.1110	F1	mg/Kg		56	70 - 130	13	35
o-Xylene	<0.00200	U F1	0.0998	0.06353	F1	mg/Kg		64	70 - 130	13	35

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

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

Lab Sample ID: MB 880-36226/1-A

Matrix: Solid

Analysis Batch: 36216

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36226

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 09:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 09:43	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 09:43	1

	MB MB				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90	70 - 130	10/06/22 08:40	10/06/22 09:43	1
o-Terphenyl	93	70 - 130	10/06/22 08:40	10/06/22 09:43	1

1-Chlorooctane 90 70 - 130 10/06/22 08:40 10/06/22 09:43 1
o-Terphenyl 93 70 - 130 10/06/22 08:40 10/06/22 09:43 1

Lab Sample ID: LCS 880-36226/2-A Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Total/NA

Analysis Batch: 36216							Prep B	atch: 36226
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1077		mg/Kg		108	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	910.0		mg/Kg		91	70 - 130	
C10-C28)								

Eurofins Carlsbad

9

3

4

5

7

9

11

13

14

olins Carisbac

Client: Ensolum Job ID: 890-3139-1 SDG: 03A1987053 Project/Site: EP USA 3

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

110

Lab Sample ID: LCS 880-36226/2-A

Matrix: Solid

Analysis Batch: 36216

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 36226

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

Lab Sample ID: LCSD 880-36226/3-A

Matrix: Solid

o-Terphenyl

Analysis Batch: 36216

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 36226

LCSD LCSD %Rec **RPD** Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 1190 mg/Kg 119 70 - 130 10 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1038 mg/Kg 104 70 - 130 13 20 C10-C28)

70 - 130

LCSD LCSD

Lab Sample ID: 880-20033-A-1-C MS

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 116 70 - 130 70 - 130 o-Terphenyl 120

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 36226

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier Limits **Analyte** Unit D %Rec Ū 70 - 130 Gasoline Range Organics <50.0 998 955.9 mg/Kg 92 (GRO)-C6-C10 998 Diesel Range Organics (Over 101 922.3 mg/Kg 82 70 - 130

C10-C28)

Matrix: Solid

Analysis Batch: 36216

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 94 o-Terphenyl 85 70 - 130

Lab Sample ID: 880-20033-A-1-D MSD

Analysis Batch: 36216

Matrix: Solid

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

Prep Batch: 36226

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier RPD Added Result Qualifier Limits Limit **Analyte** Unit %Rec Gasoline Range Organics <50.0 U 999 892.0 86 70 - 130 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 101 999 803.4 mg/Kg 70 70 - 130 14 20

C10-C28)

MSD MSD

%Recovery Qualifier Limits Surrogate 1-Chlorooctane 82 70 - 130 71 o-Terphenyl 70 - 130

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: MB 880-36849/1-A

Lab Sample ID: LCS 880-36849/2-A

Matrix: Solid

Analysis Batch: 36918

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 36849

	MB	INIR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/13/22 10:24	10/14/22 19:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/13/22 10:24	10/14/22 19:36	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/13/22 10:24	10/14/22 19:36	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130	10/13/22 10:24	10/14/22 19:36	1
o-Terphenyl	130		70 - 130	10/13/22 10:24	10/14/22 19:36	1

Client Sample ID: Lab Control Sample

Prep Batch: 36849

Matrix: Solid Prep Type: Total/NA Prep Batch: 36849 **Analysis Batch: 36918** Spike LCS LCS %Rec

Analyte Added Result Qualifier Unit Limits D %Rec 1000 1101 110 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1057 106 mg/Kg 70 - 130 C10-C28)

LCS LCS

١	Surrogate	%Recovery	Qualifier	Limits
	1-Chlorooctane	69	S1-	70 - 130
I	o-Terphenyl	86		70 - 130

Lab Sample ID: LCSD 880-36849/3-A Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 36918

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	991.9		mg/Kg		99	70 - 130	10	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1151		mg/Kg		115	70 - 130	8	20
C10-C28)									

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	97		70 - 130

Lab Sample ID: 880-20328-A-1-B MS **Client Sample ID: Matrix Spike** Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 36918									Prep i	36849
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	998	871.4		mg/Kg		86	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.8	U	998	1191		mg/Kg		119	70 - 130	

Lab Sample ID: 880-20328-A-1-B MS

Job ID: 890-3139-1 SDG: 03A1987053

Client: Ensolum Project/Site: EP USA 3

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

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 36849

Matrix: Solid Analysis Batch: 36918

MS MS %Recovery Qualifier Limits Surrogate 197 S1+ 1-Chlorooctane 70 - 130 o-Terphenyl 189 S1+ 70 - 130

Lab Sample ID: 880-20328-A-1-C MSD Client Sample ID: Matrix Spike Duplicate **Prep Type: Total/NA**

Matrix: Solid

C10-C28)

Analysis Batch: 36918 Prep Batch: 36849 MSD MSD %Rec **RPD** Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics <49.8 U 998 830.5 mg/Kg 82 70 - 130 5 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.8 U 998 1172 mg/Kg 117 70 - 130 2 20

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 192 S1+ 70 - 130 70 - 130 o-Terphenyl 186 S1+

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-36234/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 36484

MB MB

RL Analyte Result Qualifier **MDL** Unit Prepared Analyzed Dil Fac Chloride 5.00 10/08/22 08:23 <5.00 U mg/Kg

Lab Sample ID: LCS 880-36234/2-A

Matrix: Solid

Analysis Batch: 36484

Spike LCS LCS %Rec Analyte Added Result Qualifier D %Rec Limits Unit 250 274.4 Chloride mg/Kg 110 90 - 110

Lab Sample ID: LCSD 880-36234/3-A

Matrix: Solid

Analysis Batch: 36484

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier Limits Analyte Unit D %Rec RPD Limit Chloride 250 266.3 mg/Kg 107 90 - 110

Lab Sample ID: 890-3139-8 MS

Released to Imaging: 5/17/2023 8:58:09 AM

Matrix: Solid

Analysis Batch: 36484

7 maryolo Batom 00404	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	116	F1	250	518.0	F1	mg/Kg		161	90 - 110	

Eurofins Carlsbad

Prep Type: Soluble

Prep Type: Soluble

Client Sample ID: Lab Control Sample

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

Client Sample ID: PH04

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3

SDG: 03A1987053

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3139-8 MSD **Client Sample ID: PH04 Matrix: Solid Prep Type: Soluble**

Analysis Batch: 36484

MSD MSD Sample Sample Spike %Rec **RPD** Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Analyte 116 F1 250 Chloride 507.5 F1 mg/Kg 157 90 - 110 2 20

Lab Sample ID: MB 880-36893/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 36896

MB MB **MDL** Unit Analyte Result Qualifier RL D Prepared Analyzed Dil Fac 5.00 10/13/22 17:50 Chloride <5.00 U mg/Kg

Lab Sample ID: LCS 880-36893/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 36896

Spike LCS LCS %Rec Added Result Qualifier Limits **Analyte** Unit D %Rec Chloride 250 260.3 104 90 - 110 mg/Kg

Lab Sample ID: LCSD 880-36893/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 36896

Spike LCSD LCSD %Rec **RPD** Added Analyte Result Qualifier Unit %Rec Limits **RPD** Limit Chloride 250 261.4 105 mg/Kg 90 - 110

Lab Sample ID: 890-3139-1 MS

Matrix: Solid

Analysis Batch: 36896

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added %Rec Result Qualifier Unit Limits Chloride 79.3 250 97 90 - 110 321.9 mg/Kg

Lab Sample ID: 890-3139-1 MSD

Matrix: Solid

Analysis Batch: 36896

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Limits **RPD** Limit Analyte Unit D %Rec 79.3 250 322.5 Chloride mg/Kg 97 90 - 110 20

Eurofins Carlsbad

Client Sample ID: PH01

Client Sample ID: PH01

Prep Type: Soluble

Prep Type: Soluble

 Client: Ensolum
 Job ID: 890-3139-1

 Project/Site: EP USA 3
 SDG: 03A1987053

GC VOA

Prep Batch: 36589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3139-1	PH01	Total/NA	Solid	5035	
890-3139-2	PH01	Total/NA	Solid	5035	
890-3139-3	PH02	Total/NA	Solid	5035	
890-3139-4	PH02	Total/NA	Solid	5035	
890-3139-5	PH03	Total/NA	Solid	5035	
890-3139-6	PH03	Total/NA	Solid	5035	
890-3139-7	PH04	Total/NA	Solid	5035	
890-3139-8	PH04	Total/NA	Solid	5035	
MB 880-36589/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36589/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36589/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3139-1 MS	PH01	Total/NA	Solid	5035	
890-3139-1 MSD	PH01	Total/NA	Solid	5035	

Analysis Batch: 36716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3139-1	PH01	Total/NA	Solid	8021B	36589
890-3139-2	PH01	Total/NA	Solid	8021B	36589
890-3139-3	PH02	Total/NA	Solid	8021B	36589
890-3139-4	PH02	Total/NA	Solid	8021B	36589
890-3139-5	PH03	Total/NA	Solid	8021B	36589
890-3139-6	PH03	Total/NA	Solid	8021B	36589
890-3139-7	PH04	Total/NA	Solid	8021B	36589
890-3139-8	PH04	Total/NA	Solid	8021B	36589
MB 880-36589/5-A	Method Blank	Total/NA	Solid	8021B	36589
LCS 880-36589/1-A	Lab Control Sample	Total/NA	Solid	8021B	36589
LCSD 880-36589/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36589
890-3139-1 MS	PH01	Total/NA	Solid	8021B	36589
890-3139-1 MSD	PH01	Total/NA	Solid	8021B	36589

Analysis Batch: 36761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3139-1	PH01	Total/NA	Solid	Total BTEX	
890-3139-2	PH01	Total/NA	Solid	Total BTEX	
890-3139-3	PH02	Total/NA	Solid	Total BTEX	
890-3139-4	PH02	Total/NA	Solid	Total BTEX	
890-3139-5	PH03	Total/NA	Solid	Total BTEX	
890-3139-6	PH03	Total/NA	Solid	Total BTEX	
890-3139-7	PH04	Total/NA	Solid	Total BTEX	
890-3139-8	PH04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 36216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3139-1	PH01	Total/NA	Solid	8015B NM	36226
890-3139-2	PH01	Total/NA	Solid	8015B NM	36226
890-3139-3	PH02	Total/NA	Solid	8015B NM	36226
890-3139-4	PH02	Total/NA	Solid	8015B NM	36226
890-3139-5	PH03	Total/NA	Solid	8015B NM	36226
890-3139-6	PH03	Total/NA	Solid	8015B NM	36226

Eurofins Carlsbad

Page 19 of 30

3

4

6

8

11

13

14

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

GC Semi VOA (Continued)

Analysis Batch: 36216 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3139-7	PH04	Total/NA	Solid	8015B NM	36226
890-3139-8	PH04	Total/NA	Solid	8015B NM	36226
MB 880-36226/1-A	Method Blank	Total/NA	Solid	8015B NM	36226
LCS 880-36226/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	36226
LCSD 880-36226/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	36226
880-20033-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	36226
880-20033-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	36226

Prep Batch: 36226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3139-1	PH01	Total/NA	Solid	8015NM Prep	
890-3139-2	PH01	Total/NA	Solid	8015NM Prep	
890-3139-3	PH02	Total/NA	Solid	8015NM Prep	
890-3139-4	PH02	Total/NA	Solid	8015NM Prep	
890-3139-5	PH03	Total/NA	Solid	8015NM Prep	
890-3139-6	PH03	Total/NA	Solid	8015NM Prep	
890-3139-7	PH04	Total/NA	Solid	8015NM Prep	
890-3139-8	PH04	Total/NA	Solid	8015NM Prep	
MB 880-36226/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-36226/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-36226/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-20033-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-20033-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 36331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3139-1	PH01	Total/NA	Solid	8015 NM	
890-3139-2	PH01	Total/NA	Solid	8015 NM	
890-3139-3	PH02	Total/NA	Solid	8015 NM	
890-3139-4	PH02	Total/NA	Solid	8015 NM	
890-3139-5	PH03	Total/NA	Solid	8015 NM	
890-3139-6	PH03	Total/NA	Solid	8015 NM	
890-3139-7	PH04	Total/NA	Solid	8015 NM	
890-3139-8	PH04	Total/NA	Solid	8015 NM	

Prep Batch: 36849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-36849/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-36849/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-36849/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-20328-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-20328-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 36918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-36849/1-A	Method Blank	Total/NA	Solid	8015B NM	36849
LCS 880-36849/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	36849
LCSD 880-36849/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	36849
880-20328-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	36849
880-20328-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	36849

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

HPLC/IC

Leach Batch: 36234

Lab Sample ID MB 880-36234/1-A	Client Sample ID Method Blank	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
LCS 880-36234/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-36234/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3139-8 MS	PH04	Soluble	Solid	DI Leach	
890-3139-8 MSD	PH04	Soluble	Solid	DI Leach	

Analysis Batch: 36484

Lab Sample ID MB 880-36234/1-A	Client Sample ID Method Blank	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 36234
LCS 880-36234/2-A	Lab Control Sample	Soluble	Solid	300.0	36234
LCSD 880-36234/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	36234
890-3139-8 MS	PH04	Soluble	Solid	300.0	36234
890-3139-8 MSD	PH04	Soluble	Solid	300.0	36234

Leach Batch: 36893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3139-1	PH01	Soluble	Solid	DI Leach	
890-3139-2	PH01	Soluble	Solid	DI Leach	
890-3139-3	PH02	Soluble	Solid	DI Leach	
890-3139-4	PH02	Soluble	Solid	DI Leach	
890-3139-5	PH03	Soluble	Solid	DI Leach	
890-3139-6	PH03	Soluble	Solid	DI Leach	
890-3139-7	PH04	Soluble	Solid	DI Leach	
890-3139-8	PH04	Soluble	Solid	DI Leach	
MB 880-36893/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-36893/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-36893/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3139-1 MS	PH01	Soluble	Solid	DI Leach	
890-3139-1 MSD	PH01	Soluble	Solid	DI Leach	

Analysis Batch: 36896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3139-1	PH01	Soluble	Solid	300.0	36893
890-3139-2	PH01	Soluble	Solid	300.0	36893
890-3139-3	PH02	Soluble	Solid	300.0	36893
890-3139-4	PH02	Soluble	Solid	300.0	36893
890-3139-5	PH03	Soluble	Solid	300.0	36893
890-3139-6	PH03	Soluble	Solid	300.0	36893
890-3139-7	PH04	Soluble	Solid	300.0	36893
890-3139-8	PH04	Soluble	Solid	300.0	36893
MB 880-36893/1-A	Method Blank	Soluble	Solid	300.0	36893
LCS 880-36893/2-A	Lab Control Sample	Soluble	Solid	300.0	36893
LCSD 880-36893/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	36893
890-3139-1 MS	PH01	Soluble	Solid	300.0	36893
890-3139-1 MSD	PH01	Soluble	Solid	300.0	36893

Eurofins Carlsbad

10/17/2022 (Rev. 1)

Job ID: 890-3139-1

Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053 Client Sample ID: PH01 Lab Sample ID: 890-3139-1

Matrix: Solid

Date Collected: 10/04/22 10:00 Date Received: 10/04/22 15:18

	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	36589	10/10/22 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36716	10/12/22 11:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36761	10/12/22 14:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			36331	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 13:09	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	36893	10/13/22 15:19	CH	EET MID
Soluble	Analysis	300.0		1			36896	10/13/22 18:05	CH	EET MID

Client Sample ID: PH01 Lab Sample ID: 890-3139-2 Date Collected: 10/04/22 10:10 **Matrix: Solid**

Date Received: 10/04/22 15:18

Batch Batch Dil Initial Final Batch Prepared Method Number **Prep Type** Type Run **Factor Amount** Amount or Analyzed **Analyst** Lab Total/NA 5035 36589 10/10/22 13:30 MNR EET MID Prep 4.97 g 5 mL 36716 Total/NA 8021B 5 mL 10/12/22 12:13 MNR **EET MID** Analysis 5 mL 1 Total/NA Total BTEX Analysis 36761 10/12/22 14:00 SM **EET MID** 1 Total/NA 8015 NM **EET MID** Analysis 1 36331 10/07/22 09:09 SM Total/NA Prep 8015NM Prep 10.02 g 10 mL 36226 10/06/22 08:40 DM **EET MID** Total/NA 8015B NM 36216 10/06/22 13:29 SM Analysis 1 uL 1 uL **EET MID** Soluble 5.05 g 50 mL 36893 10/13/22 15:19 CH Leach DI Leach **EET MID** 300.0 10/13/22 18:19 CH Soluble Analysis 1 36896 **EET MID**

Client Sample ID: PH02 Lab Sample ID: 890-3139-3 Date Collected: 10/04/22 10:20 **Matrix: Solid**

Date Received: 10/04/22 15:18

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	36589	10/10/22 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36716	10/12/22 12:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36761	10/12/22 14:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			36331	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 12:08	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36893	10/13/22 15:19	CH	EET MIC
Soluble	Analysis	300.0		1			36896	10/13/22 18:24	CH	EET MID

Client Sample ID: PH02 Lab Sample ID: 890-3139-4 Date Collected: 10/04/22 10:30 **Matrix: Solid**

Date Received: 10/04/22 15:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	36589	10/10/22 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36716	10/12/22 12:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36761	10/12/22 14:00	SM	EET MID

Eurofins Carlsbad

Page 22 of 30

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

Lab Sample ID: 890-3139-4

Matrix: Solid

EET MID

Date Collected: 10/04/22 10:30 Date Received: 10/04/22 15:18

Client Sample ID: PH02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			36331	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 13:50	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	36893	10/13/22 15:19	CH	EET MID
Soluble	Analysis	300.0		1			36896	10/13/22 18:29	СН	EET MID

Client Sample ID: PH03 Lab Sample ID: 890-3139-5 Date Collected: 10/04/22 10:40 **Matrix: Solid**

Date Received: 10/04/22 15:18

Batch Dil Initial Final **Batch** Prepared Batch Method Amount Amount Number **Prep Type** Type Run **Factor** or Analyzed Analyst Lab Total/NA Prep 5035 36589 10/10/22 13:30 4.99 g MNR 5 mL **EET MID** Total/NA Analysis 8021B 5 mL 5 mL 36716 10/12/22 13:15 MNR **EET MID** 1 Total/NA Analysis Total BTEX 1 36761 10/12/22 14:00 SM **EET MID** Total/NA 8015 NM 10/07/22 09:09 SM Analysis 36331 **EET MID** Total/NA Prep 8015NM Prep 10.03 g 36226 10/06/22 08:40 DM **EET MID** 10 mL Total/NA 8015B NM 36216 10/06/22 12:28 SM Analysis 1 uL 1 uL **EET MID** 10/13/22 15:19 CH Soluble Leach DI Leach 4.96 g 50 mL 36893 **EET MID**

Client Sample ID: PH03 Lab Sample ID: 890-3139-6 Matrix: Solid

1

36896

10/13/22 18:34 CH

Date Collected: 10/04/22 11:00 Date Received: 10/04/22 15:18

Analysis

Soluble

300.0

_	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	36589	10/10/22 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36716	10/12/22 13:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36761	10/12/22 14:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			36331	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 14:10	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	36893	10/13/22 15:19	CH	EET MID
Soluble	Analysis	300.0		1			36896	10/13/22 18:48	CH	EET MID

Client Sample ID: PH04 Lab Sample ID: 890-3139-7 Date Collected: 10/04/22 11:10 **Matrix: Solid**

Date Received: 10/04/22 15:18

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	36589	10/10/22 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36716	10/12/22 13:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36761	10/12/22 14:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			36331	10/07/22 09:09	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.03 g 1 uL	10 mL 1 uL	36226 36216	10/06/22 08:40 10/06/22 12:48	DM SM	EET MID EET MID

Client: Ensolum Job ID: 890-3139-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: PH04 Lab Sample ID: 890-3139-7

Matrix: Solid

Date Collected: 10/04/22 11:10 Date Received: 10/04/22 15:18

		Batch	Batch		Dil	Initial	Final	Batch	Prepared		
	Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
	Soluble	Leach	DI Leach			5 g	50 mL	36893	10/13/22 15:19	CH	EET MID
Į	Soluble	Analysis	300.0		1			36896	10/13/22 18:53	CH	EET MID

Client Sample ID: PH04 Lab Sample ID: 890-3139-8

Date Collected: 10/04/22 11:20 Matrix: Solid

Date Received: 10/04/22 15:18

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	36589	10/10/22 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36716	10/12/22 14:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36761	10/12/22 14:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			36331	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 14:30	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	36893	10/13/22 15:19	CH	EET MID
Soluble	Analysis	300.0		1			36896	10/13/22 18:58	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
 Job ID: 890-3139-1

 Project/Site: EP USA 3
 SDG: 03A1987053

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 analyte the agency does not		ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for which
and agency does not	oner certification.			
Analysis Method	Prep Method	Matrix	Analyte	
0 ,		Matrix Solid	Analyte Total TPH	

ı

6

7

9

10

Method Summary

Client: Ensolum Project/Site: EP USA 3 Job ID: 890-3139-1

SDG: 03A1987053

l ab and an	
Laboratory EET MID	
EET MID	
FET MID	

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: EP USA 3

Job ID: 890-3139-1

SDG: 03A1987053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3139-1	PH01	Solid	10/04/22 10:00	10/04/22 15:18	0.5'
890-3139-2	PH01	Solid	10/04/22 10:10	10/04/22 15:18	4'
890-3139-3	PH02	Solid	10/04/22 10:20	10/04/22 15:18	0.5'
890-3139-4	PH02	Solid	10/04/22 10:30	10/04/22 15:18	4'
890-3139-5	PH03	Solid	10/04/22 10:40	10/04/22 15:18	0.5'
890-3139-6	PH03	Solid	10/04/22 11:00	10/04/22 15:18	4'
890-3139-7	PH04	Solid	10/04/22 11:10	10/04/22 15:18	0.5'
890-3139-8	PH04	Solid	10/04/22 11:20	10/04/22 15:18	4'

eg. h. 01

Environment Testing

Xenco

Project Manager:

Ben Belill

Bill to: (if different)

Jim Raley

Company Name:

WPX

ompany Name:

Ensolum

City, State ZIP: ddress:

989-854-0852 Carlsbad, NM 88220 3122 National Parks HWY

Email: BBelill@Ensolum.com, jim.raley@dvn.com

City, State ZIP:

Carlsbad, NM 88220 5315 Buena Vista Dr

Address:

Turn Around

Rush

Chain of Custody

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

Work Order No:

88-3199	www.xenco.com Page f 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:
ANALYSIS REQUEST	JEST Preservative Codes

None: NO

Di Water: H₂O

MeOH: Me

Relinquished 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 subcontract 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 losss of Eurofins Xenco, A minimum charge of \$86.00 will be applied to each project and a charge of \$6 for each sample submitted to Eurofins Xenco, but not analyzed. These te	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010			PH04	PH04	PH03	PH03	PH02	PH02	PH01	PH01	Sample Identification	Total Containers:	Sample Custody Seals:	Cooler Custody Seals:	Samples Received Intact:	SAMPLE RECEIPT	CC #:	Sampler's Name:	Project Location:
1	it and relinquishmen liable only for the co arge of \$85.00 will b	al(s) to be analy	200.8 / 6020:			(n	S	S	S	S	S	S	S	on Matrix		Yes No NA	Yes No NIA	No No	Temp Blank:	1061155101	Gilbert Moreno	Eddy County, NM
), Receive	t of samples con ost of samples an e applied to each	/zed	8		26/26	10.4.23	10.4.22	10.4.22	10.4.22	10.4.22	10.4.22	10.4.22	10.4.22	Date Sampled	Corrected Temperature:	Temperature Reading	N/A Correction Factor:	Thermometer ID:	(xes) No)	no	M
Received by: (Signature)	stitutes a valid nd shall not assi i project and a c	TCLP / S	8RCRA 13PPM		7	11:20	11:10	11:00	10:40	10:30	10:20	10:10	10:00	Time Sampled	emperature:	e Reading:	actor	4	Wet ice:	the lab, if rec	TAT starts the	Due Date:
ture)	ourchase order f ume any respons harge of \$5 for e	TCLP / SPLP 6010: 8RCRA	- 11	_		4 Grabi	0.5' Grab/	4' Grab/	0.5' Grab/	4' Grab/	0.5' Grab/	4' Grab/	0.5' Grab/	Depth Comp	4.4	4.6	() ()	MM OOF	No No	the lab, if received by 4:30pm	TAT starts the day received by	5 Day TAT
	rom clien sibility for ach samp	RCRA	Texas 11 Al Sb	\vdash	\parallel	9	<u>5</u>	1	1	1	1	1	1	b/ # of Cont		<u> </u>	Pa	arar	nete	٠	¥	<u> </u>
Date	t compar any loss ole subm	Sb /	Sb As		\parallel	×	×	×	×	×	×	×	×	CHLO	RIDE	S (E	PA:	300).0)		-	
Date/Time	y to Eur ses or ex itted to E	Sb As Ba Be	Ba			×	×	×	×	×	×	×	×	TPH (8	015)							
	ofins Xe penses i urofins		Ве В			X	×	×	×	×	×	×	×	BTEX	(802 ⁻	1						
Relinquished 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. A minimum charge of \$88.00 will be applied to each project and a charge of \$6 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Cd Ca Cr Co Cu Fe Pb Mg Mn													890-3439 Chain of Custody				_		
Received by: (Signature) Date/Time	ors. It assigns standard terms and conditions as are due to circumstances beyond the control rms will be enforced unless previously negotiated.	Ag TI U Hg: 1631 / 245.1 / 7470 / 7471	Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr TI Sn U V Zn							NAB1622531873	Incident Numbers			Sample Comments	NaOH+Ascorbic Acid: SAPC	Zn Acetate+NaOH: Zn	Na ₂ S ₂ C ₃ : NaSC ₃	NaHSO4: NABIS	H ₃ PO ₄ : HP	H ₂ SO ₄ : H ₂ NaOH: Na		<u>~</u>

Project Number:

Eddy County, NM 03A1987053 EP USA 3

Due Date: ☑ Routine oject Name:

Revised Date: 08/25/2020 Rev 2020.

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3139-1

SDG Number: 03A1987053

Login Number: 3139 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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

3

4

6

0

46

13

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3139-1

SDG Number: 03A1987053

List Source: Eurofins Midland
List Number: 2
List Creation: 10/05/22 12:21 PM

Creator: Rodriguez, Leticia

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

_

3

5

7

0

1 1

12

14

<6mm (1/4").



Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3299-1

Laboratory Sample Delivery Group: Eddy County NM

Client Project/Site: EP USA 3

Revision: 1

For:

🗱 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Devon Team

MAMER

Authorized for release by: 11/4/2022 2:36:45 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Review your project results through

.....LINKS

Have a Question?



Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 5/17/2023 8:58:09 AM

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

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

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

1

2

4

5

6

Ω

0

10

1 2

Client: Ensolum

Project/Site: EP USA 3

Laboratory Job ID: 890-3299-1 SDG: Eddy County NM

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	8
QC Sample Results	9
QC Association Summary	14
Lab Chronicle	16
Certification Summary	17
Method Summary	18
Sample Summary	19
Chain of Custody	20
Receipt Checklists	21

2

3

4

8

40

11

Definitions/Glossary

Client: Ensolum Job ID: 890-3299-1 Project/Site: EP USA 3 SDG: Eddy County NM

Qualifiers

GC VOA	
Qualifier	

Quannon	Quantor 2000 photo
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

Qualifier Description

S1-Surrogate recovery exceeds control limits, low biased. U

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*_	LCS and/or LCSD is outside acceptance limits, low biased.
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

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)

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

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

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

NC Not Calculated

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

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)

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

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

Too Numerous To Count **TNTC**

Released to Imaging: 5/17/2023 8:58:09 AM

Case Narrative

Client: Ensolum Project/Site: EP USA 3 Job ID: 890-3299-1 SDG: Eddy County NM

Job ID: 890-3299-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3299-1

REVISION

The report being provided is a revision of the original report sent on 11/2/2022. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Report revision history

Receipt

The samples were received on 10/27/2022 11:29 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-3299-1), FS02 (890-3299-2) and FS03 (890-3299-3).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-38292 and analytical batch 880-38317 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (880-20849-A-1-E MS) and (880-20849-A-1-F MSD). Evidence of matrix interferences is not obvious.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-38114 and analytical batch 880-38169 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-38114 and analytical batch 880-38169 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-3350-A-1-E MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-38586 and analytical batch 880-38574 was outside control limits. Sample non-homogeneity is suspected.

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

HPLC/IC

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

3

Λ

5

6

8

4.0

11

13

Matrix: Solid

Lab Sample ID: 890-3299-1

11/03/22 08:35 11/04/22 02:41

Client Sample Results

Client: Ensolum

Project/Site: EP USA 3

Job ID: 890-3299-1

SDG: Eddy County NM

Client Sample ID: FS01

Date Collected: 10/26/22 13:00 Date Received: 10/27/22 11:29

Sample Depth: 1'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/31/22 13:44	11/01/22 15:11	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/31/22 13:44	11/01/22 15:11	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/31/22 13:44	11/01/22 15:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/31/22 13:44	11/01/22 15:11	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/31/22 13:44	11/01/22 15:11	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/31/22 13:44	11/01/22 15:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130				10/31/22 13:44	11/01/22 15:11	1
1,4-Difluorobenzene (Surr)	106		70 - 130				10/31/22 13:44	11/01/22 15:11	1

Method: TAL SOP Total BTEX	X - Total BTEX Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/02/22 10:02	1
 Method: SW846 8015 NM - Die	sel Range	Organics (DRO) (GC)						

Method. 344040 0013 MM - Dies	ei Kange Organics (b	iko) (GC)					
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg			10/31/22 12:28	1

Method: SW846 8015B NM - D Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/03/22 08:35	11/04/22 02:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/03/22 08:35	11/04/22 02:41	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/03/22 08:35	11/04/22 02:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130				11/03/22 08:35	11/04/22 02:41	1

Method: MCAWW 300.0 - Anio	ns, Ion Chromat	tography - Soluble					
Analyte	Result Qualit	ifier RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	113	5.00	mg/Kg			10/30/22 01:20	1

70 - 130

84

Client Sample ID: FS02

Date Collected: 10/26/22 13:30

Lab Sample ID: 890-3299-2

Matrix: Solid

Date Received: 10/27/22 11:29

Sample Depth: 3'

o-Terphenyl

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/31/22 13:44	11/01/22 17:01	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/31/22 13:44	11/01/22 17:01	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/31/22 13:44	11/01/22 17:01	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/31/22 13:44	11/01/22 17:01	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/31/22 13:44	11/01/22 17:01	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/31/22 13:44	11/01/22 17:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				10/31/22 13:44	11/01/22 17:01	1

Eurofins Carlsbad

2

2

4

0

8

10

12

1 /

Job ID: 890-3299-1

Client: Ensolum Project/Site: EP USA 3 SDG: Eddy County NM

Client Sample ID: FS02 Lab Sample ID: 890-3299-2 Date Collected: 10/26/22 13:30 **Matrix: Solid**

Date Received: 10/27/22 11:29

Sample Depth: 3'

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

Surrogate		ualifier Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	96	70 - 130	10/31/22 13:44	11/01/22 17:01	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg	_		11/02/22 10:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	60.3		49.8		mg/Kg			10/31/22 12:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *-	49.8		mg/Kg		10/28/22 15:48	10/31/22 01:50	1
Diesel Range Organics (Over C10-C28)	<49.8	U *-	49.8		mg/Kg		10/28/22 15:48	10/31/22 01:50	1
Oll Range Organics (Over C28-C36)	60.3		49.8		mg/Kg		10/28/22 15:48	10/31/22 01:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane				10/28/22 15:48	10/31/22 01:50	1
o-Terphenyl				10/28/22 15:48	10/31/22 01:50	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte		ualifier RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	286	4.97	mg/Kg			10/30/22 01:29	1

Lab Sample ID: 890-3299-3 Client Sample ID: FS03 Matrix: Solid

Date Collected: 10/26/22 14:00 Date Received: 10/27/22 11:29

Sample Depth: 1'

Method: SW846	8021B - Volatile	Organic Con	pounds (GC)
---------------	------------------	-------------	----------	-----

MICHIOG. STYOTO OUZ ID - VO	nathe Organic	Compoun	us (OO)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/31/22 13:44	11/01/22 17:21	1
Toluene	< 0.00199	U	0.00199		mg/Kg		10/31/22 13:44	11/01/22 17:21	1
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		10/31/22 13:44	11/01/22 17:21	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/31/22 13:44	11/01/22 17:21	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		10/31/22 13:44	11/01/22 17:21	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/31/22 13:44	11/01/22 17:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				10/31/22 13:44	11/01/22 17:21	1
1.4-Difluorobenzene (Surr)	108		70 - 130				10/31/22 13:44	11/01/22 17:21	1

н					
ı	Method: TA	AI SOP	Total RTF)	′ - Total RT	EX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/02/22 10:02	1

Client Sample Results

Client: Ensolum Job ID: 890-3299-1
Project/Site: EP USA 3 SDG: Eddy County NM

Client Sample ID: FS03 Lab Sample ID: 890-3299-3

Date Collected: 10/26/22 14:00 Matrix: Solid
Date Received: 10/27/22 11:29

Sample Depth: 1'

Chloride

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/31/22 12:28	1
Method: SW846 8015B NM - D	iesel Range	e Organics	(DRO) (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *-	50.0		mg/Kg		10/28/22 15:48	10/31/22 01:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U *-	50.0		mg/Kg		10/28/22 15:48	10/31/22 01:10	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/28/22 15:48	10/31/22 01:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane							10/28/22 15:48	10/31/22 01:10	1
o-Terphenyl							10/28/22 15:48	10/31/22 01:10	1

4.99

mg/Kg

237

Eurofins Carlsbad

2

J

6

7

9

1 0

12

13

10/30/22 01:37

Surrogate Summary

Client: Ensolum Job ID: 890-3299-1 Project/Site: EP USA 3 SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

			Perce	nt Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-20849-A-1-E MS	Matrix Spike	42 S1-	72	
880-20849-A-1-F MSD	Matrix Spike Duplicate	95	95	
890-3299-1	FS01	108	106	
890-3299-2	FS02	102	96	
890-3299-3	FS03	111	108	
LCS 880-38292/1-A	Lab Control Sample	86	90	
LCSD 880-38292/2-A	Lab Control Sample Dup	74	92	
MB 880-38292/5-A	Method Blank	96	101	

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

			Perc	nt Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-3299-1	FS01	84	84		
890-3350-A-1-E MS	Matrix Spike	67 S1-	61 S1-		
890-3350-A-1-F MSD	Matrix Spike Duplicate	85	74		
LCS 880-38586/2-A	Lab Control Sample	99	89		
LCSD 880-38586/3-A	Lab Control Sample Dup	105	105		
MB 880-38586/1-A	Method Blank	83	80		

1CO = 1-Chlorooctane OTPH = o-Terphenyl

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

Matrix: Solid Prep Type: Total/NA

_			Percen	t Surrogate Rec	overy (Acce	ptance Lim	its)	
		1CO1	OTPH1					
Lab Sample ID	Client Sample ID							
890-3299-2	FS02							
890-3299-3	FS03							
MB 880-38114/1-A	Method Blank							
Surrogate Legend								
1CO = 1-Chlorooctane								
OTPH = o-Terphenyl								

Client: Ensolum Project/Site: EP USA 3

Job ID: 890-3299-1 SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-38292/5-A

Lab Sample ID: LCS 880-38292/1-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 38317

Analysis Batch: 38317

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38292

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/31/22 13:44	11/01/22 11:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/31/22 13:44	11/01/22 11:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/31/22 13:44	11/01/22 11:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/31/22 13:44	11/01/22 11:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/31/22 13:44	11/01/22 11:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/31/22 13:44	11/01/22 11:42	1

MB MB

Surrogate	%Recovery Q	Qualifier Lim	ts	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96	70 -	130	10/31/22 13:44	11/01/22 11:42	1
1,4-Difluorobenzene (Surr)	101	70 -	130	10/31/22 13:44	11/01/22 11:42	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38292

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08466		mg/Kg		85	70 - 130	
Toluene	0.100	0.09195		mg/Kg		92	70 - 130	
Ethylbenzene	0.100	0.08924		mg/Kg		89	70 - 130	
m-Xylene & p-Xylene	0.200	0.1621		mg/Kg		81	70 - 130	
o-Xylene	0.100	0.09116		mg/Kg		91	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	86		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 38317

Lab Sample ID: LCSD 880-38292/2-A

Prep Type: Total/NA Prep Batch: 38292 Spike LCSD LCSD %Rec

	Opine	LOOD LOOL				/01100		111 0
Analyte	Added	Result Quali	ifier Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08006	mg/Kg	_	80	70 - 130	6	35
Toluene	0.100	0.08417	mg/Kg		84	70 - 130	9	35
Ethylbenzene	0.100	0.08077	mg/Kg		81	70 - 130	10	35
m-Xylene & p-Xylene	0.200	0.1473	mg/Kg		74	70 - 130	10	35
o-Xylene	0.100	0.08231	mg/Kg		82	70 - 130	10	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	74	70 - 130
1,4-Difluorobenzene (Surr)	92	70 - 130

Lab Sample ID: 880-20849-A-1-E MS

Matrix: Solid

Analysis Batch: 38317

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

Prep Batch: 38292

										 •
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1 F2	0.100	0.05449	F1	mg/Kg		53	70 - 130	
Toluene	< 0.00201	U F1 F2	0.100	0.007232	F1	ma/Ka		7	70 - 130	

Prep Batch: 38292

Prep Type: Total/NA

Client Sample ID: Matrix Spike Duplicate

QC Sample Results

Client: Ensolum Job ID: 890-3299-1 Project/Site: EP USA 3 SDG: Eddy County NM

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

Lab Sample ID: 880-20849-A-1-E MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 38317

-	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U F1 F2	0.100	0.05799	F1	mg/Kg		58	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.201	0.02080	F1	mg/Kg		10	70 - 130	
o-Xylene	<0.00201	U	0.100	0.08906		mg/Kg		89	70 - 130	

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 42 S1-

70 - 130 1,4-Difluorobenzene (Surr) 72 70 - 130

Lab Sample ID: 880-20849-A-1-F MSD

Matrix: Solid

Analysis Batch: 38317									Prep E	•	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1 F2	0.0990	0.08306	F2	mg/Kg		83	70 - 130	42	35
Toluene	<0.00201	U F1 F2	0.0990	0.08825	F2	mg/Kg		89	70 - 130	170	35
Ethylbenzene	<0.00201	U F1 F2	0.0990	0.08782	F2	mg/Kg		89	70 - 130	41	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.198	0.1682	F2	mg/Kg		85	70 - 130	156	35
o-Xylene	<0.00201	U	0.0990	0.09392		mg/Kg		95	70 - 130	5	35

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

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

Lab Sample ID: MB 880-38114/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA Prep Batch: 38114

Analysis Batch: 38169

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/28/22 15:48	10/30/22 21:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/28/22 15:48	10/30/22 21:02	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/28/22 15:48	10/30/22 21:02	1

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 10/28/22 15:48 10/30/22 21:02 10/28/22 15:48 10/30/22 21:02 o-Terphenyl

Lab Sample ID: LCS 880-38114/2-A

Analysis Batch: 38169 Analyte								atch: 38114
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	51000	990.8	*_	mg/Kg		2	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	51000	966.7	*_	mg/Kg		2	70 - 130	
C10-C28)								

Eurofins Carlsbad

Client Sample ID: Lab Control Sample

Client: Ensolum Job ID: 890-3299-1
Project/Site: EP USA 3 SDG: Eddy County NM

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

Lab Sample ID: LCSD 880-38114/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Prep Type: Total/NA
Prep Batch: 38114

Analysis Batch: 38169 Spike LCSD LCSD %Rec **RPD** Added Result Qualifier %Rec Limits RPD Limit Analyte Unit D 51000 819.4 *-Gasoline Range Organics mg/Kg 2 70 - 130 19 20 (GRO)-C6-C10 70 - 130R

Lab Sample ID: 890-3298-A-1-G MS

Client Sample ID: Matrix Spike

Matrix: Solid Analysis Batch: 38169 Prep Type: Total/NA Prep Batch: 38114

Sample Sample Spike MS MS %Rec Added Analyte Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <49.8 U *- F1 50900 1020 F1 mg/Kg 2 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.8 U*-F1F2 50900 674.4 F1 mg/Kg 70 - 130 C10-C28)

Lab Sample ID: 890-3298-A-1-H MSD

Matrix: Solid

Analysis Batch: 38169

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 38114

Analysis Batch: 38169 Spike MSD MSD %Rec **RPD** Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit Gasoline Range Organics <49.8 U *- F1 50900 1028 F1 70 - 130 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <49.8 U *- F1 F2 50900 841.7 F1 F2 mg/Kg 2 70 - 13022 20

C10-C28)

Lab Sample ID: MB 880-38586/1-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 38574

MB MB

Prep Batch: 38586

Result Qualifier MDL Unit Analyzed Dil Fac Analyte RL Prepared <50.0 Ū 11/03/22 08:35 11/03/22 22:42 Gasoline Range Organics 50.0 mg/Kg (GRO)-C6-C10 11/03/22 08:35 11/03/22 22:42 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 mg/Kg 11/03/22 08:35 11/03/22 22:42

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 83 70 - 130 11/03/22 08:35 11/03/22 22:42 11/03/22 08:35 11/03/22 22:42 o-Terphenyl 80 70 - 130

Lab Sample ID: LCS 880-38586/2-A

Client Sample ID: Lab Control Sample
Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 38574 Prep Batch: 38586

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	887.3		mg/Kg	_	89	70 - 130	
Diesel Range Organics (Over	1000	1144		mg/Kg		114	70 - 130	
C10-C28)								

Eurofins Carlsbad

1

3

5

7

8

10

12

13

4)

Client: Ensolum Job ID: 890-3299-1 Project/Site: EP USA 3 SDG: Eddy County NM

Limits

70 - 130

70 - 130

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

89

Lab Sample ID: LCS 880-38586/2-A

Matrix: Solid

o-Terphenyl

Analysis Batch: 38574

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38586

LCS LCS %Recovery Qualifier Surrogate 1-Chlorooctane 99

Lab Sample ID: LCSD 880-38586/3-A

Matrix: Solid

Analysis Batch: 38574

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 38586

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 1084 mg/Kg 108 70 - 130 20 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1300 mg/Kg 130 70 - 130 13 20 C10-C28)

LCSD LCSD

Lab Sample ID: 890-3350-A-1-E MS

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

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 38586

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier Limits **Analyte** Unit D %Rec Gasoline Range Organics 59.2 997 819.8 mg/Kg 76 70 - 130 (GRO)-C6-C10 997 Diesel Range Organics (Over <50.0 U F2 747.7 mg/Kg 75 70 - 130

C10-C28)

Matrix: Solid

Analysis Batch: 38574

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane S1-70 - 130 67 o-Terphenyl 61 S1-70 - 130

Lab Sample ID: 890-3350-A-1-F MSD **Matrix: Solid**

Analysis Batch: 38574

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

Prep Batch: 38586

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Limits **RPD** Limit **Analyte** Unit %Rec Gasoline Range Organics 59.2 999 958.5 90 70 - 130 20 mg/Kg 16 (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U F2 999 926.8 F2 mg/Kg 93 70 - 130 21 20

C10-C28)

MSD MSD

%Recovery Qualifier Limits Surrogate 1-Chlorooctane 85 70 - 130 o-Terphenyl 74 70 - 130

QC Sample Results

Client: Ensolum Job ID: 890-3299-1 Project/Site: EP USA 3 SDG: Eddy County NM

Client Sample ID: Method Blank

Prep Type: Soluble

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38012/1-A

Lab Sample ID: LCS 880-38012/2-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 38160

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte D Prepared 5.00 10/29/22 21:26 Chloride <5.00 U mg/Kg

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analysis Batch: 38160

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits 250 90 - 110 Chloride 247.7 mg/Kg 99

Lab Sample ID: LCSD 880-38012/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38160

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier Limits **RPD** Limit **Analyte** Unit %Rec Chloride 250 246.6 99 90 - 110 20 mg/Kg

Lab Sample ID: 880-20845-A-28-B MS **Client Sample ID: Matrix Spike Matrix: Solid Prep Type: Soluble**

Analysis Batch: 38160

Spike MS MS %Rec Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 251 360.4 118 mg/Kg 97 90 - 110

Lab Sample ID: 880-20845-A-28-C MSD

Matrix: Solid

Analysis Batch: 38160

MSD MSD RPD Sample Sample Spike %Rec Analyte Result Qualifier Added Unit Limits RPD Result Qualifier %Rec Limit Chloride 118 251 354.0 94 20 mg/Kg 90 - 110

QC Association Summary

Client: Ensolum

Project/Site: EP USA 3

Job ID: 890-3299-1

SDG: Eddy County NM

GC VOA

Prep Batch: 38292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3299-1	FS01	Total/NA	Solid	5035	
890-3299-2	FS02	Total/NA	Solid	5035	
890-3299-3	FS03	Total/NA	Solid	5035	
MB 880-38292/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38292/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38292/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20849-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-20849-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 38317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3299-1	FS01	Total/NA	Solid	8021B	38292
890-3299-2	FS02	Total/NA	Solid	8021B	38292
890-3299-3	FS03	Total/NA	Solid	8021B	38292
MB 880-38292/5-A	Method Blank	Total/NA	Solid	8021B	38292
LCS 880-38292/1-A	Lab Control Sample	Total/NA	Solid	8021B	38292
LCSD 880-38292/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38292
880-20849-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	38292
880-20849-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	38292

Analysis Batch: 38459

Lab Sample ID 890-3299-1	Client Sample ID FS01	Prep Type Total/NA	Matrix Solid	Method Total BTEX	Prep Batch
890-3299-2	FS02	Total/NA	Solid	Total BTEX	
890-3299-3	FS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 38114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3299-2	FS02	Total/NA	Solid	8015NM Prep	
890-3299-3	FS03	Total/NA	Solid	8015NM Prep	
MB 880-38114/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38114/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38114/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3298-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3298-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 38169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3299-2	FS02	Total/NA	Solid	8015B NM	38114
890-3299-3	FS03	Total/NA	Solid	8015B NM	38114
MB 880-38114/1-A	Method Blank	Total/NA	Solid	8015B NM	38114
LCS 880-38114/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38114
LCSD 880-38114/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38114
890-3298-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	38114
890-3298-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38114

Analysis Batch: 38268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3299-1	FS01	Total/NA	Solid	8015 NM	

Eurofins Carlsbad

2

9

<u>5</u>

5

7

10

12

13

QC Association Summary

Client: Ensolum
Project/Site: EP USA 3
Job ID: 890-3299-1
SDG: Eddy County NM

GC Semi VOA (Continued)

Analysis Batch: 38268 (Continued)

1					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3299-2	FS02	Total/NA	Solid	8015 NM	
890-3299-3	FS03	Total/NA	Solid	8015 NM	

Analysis Batch: 38574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3299-1	FS01	Total/NA	Solid	8015B NM	38586
MB 880-38586/1-A	Method Blank	Total/NA	Solid	8015B NM	38586
LCS 880-38586/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38586
LCSD 880-38586/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38586
890-3350-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	38586
890-3350-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38586

Prep Batch: 38586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3299-1	FS01	Total/NA	Solid	8015NM Prep	
MB 880-38586/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38586/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38586/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3350-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3350-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 38012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3299-1	FS01	Soluble	Solid	DI Leach	
890-3299-2	FS02	Soluble	Solid	DI Leach	
890-3299-3	FS03	Soluble	Solid	DI Leach	
MB 880-38012/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38012/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38012/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-20845-A-28-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-20845-A-28-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 38160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3299-1	FS01	Soluble	Solid	300.0	38012
890-3299-2	FS02	Soluble	Solid	300.0	38012
890-3299-3	FS03	Soluble	Solid	300.0	38012
MB 880-38012/1-A	Method Blank	Soluble	Solid	300.0	38012
LCS 880-38012/2-A	Lab Control Sample	Soluble	Solid	300.0	38012
LCSD 880-38012/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38012
880-20845-A-28-B MS	Matrix Spike	Soluble	Solid	300.0	38012
880-20845-A-28-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38012

Eurofins Carlsbad

2

2

<u>5</u>

E

6

g

9

11

4.0

. .

Client: Ensolum Job ID: 890-3299-1 Project/Site: EP USA 3

SDG: Eddy County NM

Client Sample ID: FS01

Lab Sample ID: 890-3299-1

Date Collected: 10/26/22 13:00 Date Received: 10/27/22 11:29

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			5.02 g	5 mL	38292	10/31/22 13:44	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38317	11/01/22 15:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38459	11/02/22 10:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			38268	10/31/22 12:28	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38586	11/03/22 08:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38574	11/04/22 02:41	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	38012	10/28/22 10:53	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	38160	10/30/22 01:20	CH	EET MID

Lab Sample ID: 890-3299-2

Date Collected: 10/26/22 13:30

Client Sample ID: FS02

Matrix: Solid

Date Received: 10/27/22 11:29

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	38292	10/31/22 13:44	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38317	11/01/22 17:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38459	11/02/22 10:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			38268	10/31/22 12:28	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	38114	10/28/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38169	10/31/22 01:50	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	38012	10/28/22 10:53	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	38160	10/30/22 01:29	CH	EET MID

Client Sample ID: FS03 Lab Sample ID: 890-3299-3

Date Collected: 10/26/22 14:00 Date Received: 10/27/22 11:29

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	38292	10/31/22 13:44	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38317	11/01/22 17:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38459	11/02/22 10:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			38268	10/31/22 12:28	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	38114	10/28/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38169	10/31/22 01:10	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	38012	10/28/22 10:53	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	38160	10/30/22 01:37	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 Job ID: 890-3299-1
Project/Site: EP USA 3 SDG: Eddy County NM

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 analyte the agency does not		ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for which
and agency does not	oner certification.			
Analysis Method	Prep Method	Matrix	Analyte	
0 ,		Matrix Solid	Analyte Total TPH	

-

6

Ω

4.0

11

13

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

Method Summary

Client: Ensolum Project/Site: EP USA 3

Method

Total BTEX

8015 NM

8015B NM

8015NM Prep

DI Leach

300.0

5035

8021B

Job ID: 890-3299-1

SDG: Eddy County NM

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

EET MID

EET MID

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: EP USA 3

Job ID: 890-3299-1 SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-3299-1	FS01	Solid	10/26/22 13:00	10/27/22 11:29
890-3299-2	FS02	Solid	10/26/22 13:30	10/27/22 11:29
890-3299-3	FS03	Solid	10/26/22 14:00	10/27/22 11:29

3

4

5

8

9

10

40

13

Chain of Custody

	Xe	Xenco	d	Midian EL Pa Hobb	s, NM (575) 3	585-3443, Lut 392-7550, Cart	Mitulatic, IA (432) 104-3440, 3411 Autorito, IA (210) 505-3534 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 888-3199	www.xenco.com	co.com Page	of
Project Manager: Be	Ben Belill			Bill to: (if different)		Jim Raley		Work	or Or	
	Ensolum			Company Name		×	Pro	gram: UST/PST 🗌 PRP[Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	Superfu
	3122 National Parks HWY	arks HWY		Address:		5315 Buena Vista Dr		State of Project:		
e ZIP:	Carlsbad, NM 88220	8220		City, State ZIP:	Carl	Carlsbad, NM 88220		oorting: Level II 🔲 Level II	Reporting: Level II 🗌 Level III 📗 PST/UST 📗 TRRP 📗	Level IV
	989-854-0852		Email:	Email: BBelill@Ensolum.com, lim.raley@dvn.com	lum.com, i	im.raley@d		Deliverables: EDD	ADaPT Other:	
Project Name:	EP (EP USA 3	Turr	Turn Around			ANALYSIS REQUEST	31	Preservative Codes	ive Codes
Project Number:	03A19	03A1987053	☑ Routine	Rush	Code				None: NO	DI Water: H ₂ O
Project Location:	Eddy Co	Eddy County, NM	Due Date:	5 Day TAT					Cool: Cool	МеОН: Ме
Sampler's Name:	Yocoly Ec	Yocoly Edyte Konan	TAT starts th	TAT starts the day received by					HCL: HC	HNO3: HN
CC#	1061	1061155101	the lab, if red	the lab, if received by 4:30pm	rs				H ₂ S0 ₄ : H ₂	NaOH: Na
SAMPLE RECEIPT	Temp Blank	(Va)	No Wet ice:	Yes No	netei				H₃PO₄; HP	
Samples Received Intact:	_		Thermometer ID:	100-mn					NaHSO ₄ : NABIS	
Cooler Custody Seals:	Yes No	N/A Correcti	Correction Factor:	.0.2					Na ₂ S ₂ O ₃ : NaSO ₃	J
Sample Custody Seals:	Yes No	NA Temper	Temperature Reading:	2.8	S (EI		890-3299 Chain of Custody		Zn Acetate+NaOH: Zn)H: Zn
Sample Identification		Matrix Sampled	Date Time Sampled Sampled	Depth Grab/	CHLORID	TPH (8015	-		Sample Comments	Sample Comments
FS01		S 10.26.22	\vdash	1' Comp	1 ×					
FS02		S 10.26.22	2 13:30	3' Comp	1 ×	×				
FS03			2 14:00	1' Comp	1 ×	×		\	Incident	Incident Numbers
									NAB162	NAB1622531873
				22:00		1				
		à	Sura	10					+	
Total 200.7 / 6010	200.8 / 6020:	20:	8RCRA 13PPM	PM Texas 11	Al Sb As	s Ba Be B	Cd Ca Cr Co Cu Fe Pb	Mg Mn Mo Ni K Se Ag	SiO ₂ Na Sr Tl Sn U	V Zn
Circle Method(s) and Metal(s) to be analyzed	Metal(s) to be	analyzed	TCLP / SI	TCLP / SPLP 6010: 8RCRA	CRA Sb	As Ba Be	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni S	Ni Se Ag TI U Hg	Hg: 1631 / 245.1 / 7470 / 7471	7471
otice: Signature of this docu service. Eurofins Xenco wi Eurofins Xenco. A minimur	ument and relinquis vill be liable only for am charge of \$85.00	shment of samples the cost of sample will be applied to	constitutes a valid pass and shall not assues the constitutes a valid passues and a constitution of the co	ourchase order from ume any responsibil harge of \$5 for each	client compa ity for any los: n sample subn	ny to Eurofins) ses or expense nitted to Eurofir	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	signs standard terms and cone to circumstances beyond the be enforced unless previously	ditions control negotiated.	
Relinquished by: (Signature)	Signature)	Rece	Received by: (Signature)	ature)	Dat	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	lure)	Date/Time
Col Brit	9	Spran	La Su	- App	10/27	11 -66/5	50			
				\	(4			

11/4/2022 (Rev. 1)

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3299-1 SDG Number: Eddy County NM

List Source: Eurofins Carlsbad

Login Number: 3299 List Number: 1

Creator: Stutzman, Amanda

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

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3299-1 SDG Number: Eddy County NM

> **List Source: Eurofins Midland** List Creation: 10/28/22 10:29 AM

List Number: 2 Creator: Rodriguez, Leticia

Login Number: 3299

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	

Released to Imaging: 5/17/2023 8:58:09 AM

Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3345-1

Laboratory Sample Delivery Group: 03A1987053

Client Project/Site: EP USA 3

For:

💸 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Devon Team

RAMER

Authorized for release by: 11/8/2022 1:33:41 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

.....LINKS

Review your project results through EOL

Have a Question?



Visit us at:

www.eurofinsus.com/Env Released to Imaging: 5/17/2023 8:58:09 AM

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

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

Client: Ensolum
Project/Site: EP USA 3
Laboratory Job ID: 890-3345-1
SDG: 03A1987053

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	6
QC Sample Results	7
QC Association Summary	11
Lab Chronicle	13
Certification Summary	14
Method Summary	15
Sample Summary	16
Chain of Custody	17
Receipt Checklists	18

2

3

4

6

8

10

12

13

Definitions/Glossary

 Client: Ensolum
 Job ID: 890-3345-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Qualifiers

GC VOA

 Qualifier
 Qualifier Description

 * LCS and/or LCSD is outside acceptance limits, low biased.

 F1
 MS and/or MSD recovery exceeds control limits.

 S1+
 Surrogate recovery exceeds control limits, high biased.

 U
 Indicates the analyte was analyzed for but not detected.

GC Semi VOA

 Qualifier
 Qualifier Description

 F2
 MS/MSD RPD exceeds control limits

U Indicates the analyte was analyzed for but not detected.

HPLC/IC

U Indicates the analyte was analyzed for but not detected.

Glossary

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

Eisted 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

Practical Quantitation Lin

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Case Narrative

 Client: Ensolum
 Job ID: 890-3345-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Job ID: 890-3345-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3345-1

Receipt

The sample was received on 11/1/2022 12:43 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0° C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: SW01 (890-3345-1).

GC VOA

Method 8021B: The LCS was biased low for benzene, however the LCSD was acceptable. Since the method requires only an LCS, the data was qualified and reported. (LCS 880-38531/1-A)

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-38531 and analytical batch 880-38810 were outside control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-21034-A-1-E MSD). Evidence of matrix interferences is not obvious.

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

GC Semi VOA

Method 8015MOD_NM: The method blank for preparation batch 880-38587 and analytical batch 880-38572 contained Gasoline Range Organics (GRO)-C6-C10, Diesel Range Organics (Over C10-C28) and Oll Range Organics (Over C28-C36) 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 matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-38587 and analytical batch 880-38572 was outside control limits. Sample non-homogeneity is suspected.

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

HPLC/IC

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

1

3

J

6

7

8

10

Client Sample Results

Client: Ensolum Job ID: 890-3345-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: SW01 Date Collected: 10/31/22 11:40

Lab Sample ID: 890-3345-1

Matrix: Solid

Date Received: 11/01/22 12:43 Sample Depth: 0-3'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		11/02/22 15:55	11/08/22 09:18	
Toluene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:55	11/08/22 09:18	
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:55	11/08/22 09:18	
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/02/22 15:55	11/08/22 09:18	
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:55	11/08/22 09:18	
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/02/22 15:55	11/08/22 09:18	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	116		70 - 130				11/02/22 15:55	11/08/22 09:18	
1,4-Difluorobenzene (Surr)	101		70 - 130				11/02/22 15:55	11/08/22 09:18	
Method: TAL SOP Total BTEX -	- Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00399	U	0.00399		mg/Kg			11/08/22 13:40	
Method: SW846 8015 NM - Dies	sel Range Organ	ics (DRO) (GC)						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	249		50.0		mg/Kg			11/04/22 11:23	
Method: SW846 8015B NM - Di	esel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/03/22 08:39	11/04/22 03:25	
Diesel Range Organics (Over C10-C28)	180		50.0		mg/Kg		11/03/22 08:39	11/04/22 03:25	
Oll Range Organics (Over C28-C36)	69.4		50.0		mg/Kg		11/03/22 08:39	11/04/22 03:25	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	89		70 - 130				11/03/22 08:39	11/04/22 03:25	
o-Terphenyl	96		70 - 130				11/03/22 08:39	11/04/22 03:25	
•		aranhu C	alublo						
Method: MCAWW 300.0 - Anior	ns, Ion Chromato	grapny - St	Jiubie						
Method: MCAWW 300.0 - Anior Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Surrogate Summary

Client: Ensolum Job ID: 890-3345-1 Project/Site: EP USA 3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

-			
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-21034-A-1-D MS	Matrix Spike	125	95
880-21034-A-1-E MSD	Matrix Spike Duplicate	135 S1+	92
890-3345-1	SW01	116	101
LCS 880-38531/1-A	Lab Control Sample	99	86
LCSD 880-38531/2-A	Lab Control Sample Dup	126	97
MB 880-38531/5-A	Method Blank	88	98
MB 880-38855/5-A	Method Blank	84	101
Surrogate Legend			
BFB = 4-Bromofluoroben	zene (Surr)		

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

-				Percent Surrogate Re
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-21018-A-1-D MS	Matrix Spike	80	82	
880-21018-A-1-E MSD	Matrix Spike Duplicate	80	78	
890-3345-1	SW01	89	96	
LCS 880-38587/2-A	Lab Control Sample	82	96	
LCSD 880-38587/3-A	Lab Control Sample Dup	81	92	
MB 880-38587/1-A	Method Blank	88	105	
Surrogate Legend				
1CO = 1-Chlorooctane				

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum Job ID: 890-3345-1 SDG: 03A1987053 Project/Site: EP USA 3

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-38531/5-A

Matrix: Solid Analysis Batch: 38810 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38531

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:55	11/08/22 02:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:55	11/08/22 02:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:55	11/08/22 02:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/02/22 15:55	11/08/22 02:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:55	11/08/22 02:13	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/02/22 15:55	11/08/22 02:13	1

MB MB

Surrogate	%Recovery Q	Qualifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88	70 - 130	11/02/22 15:55	11/08/22 02:13	1
1.4-Difluorobenzene (Surr)	98	70 - 130	11/02/22 15:55	11/08/22 02:13	1

Lab Sample ID: LCS 880-38531/1-A

Matrix: Solid

Analysis Batch: 38810

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38531

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.06515	*-	mg/Kg		65	70 - 130	
Toluene	0.100	0.08772		mg/Kg		88	70 - 130	
Ethylbenzene	0.100	0.09084		mg/Kg		91	70 - 130	
m-Xylene & p-Xylene	0.200	0.1595		mg/Kg		80	70 - 130	
o-Xylene	0.100	0.07957		mg/Kg		80	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	99	70 - 130
1,4-Difluorobenzene (Surr)	86	70 - 130

Lab Sample ID: LCSD 880-38531/2-A

Matrix: Solid

Analysis Batch: 38810

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 38531

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08307		mg/Kg		83	70 - 130	24	35
Toluene	0.100	0.1069		mg/Kg		107	70 - 130	20	35
Ethylbenzene	0.100	0.1095		mg/Kg		109	70 - 130	19	35
m-Xylene & p-Xylene	0.200	0.1965		mg/Kg		98	70 - 130	21	35
o-Xylene	0.100	0.09951		mg/Kg		100	70 - 130	22	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	126		70 - 130
1.4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-21034-A-1-D MS

Matrix: Solid

Analysis Batch: 38810

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

Prep Batch: 38531

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U *- F1	0.0998	0.08068		mg/Kg		81	70 - 130	
Toluene	<0.00200	U	0.0998	0.09502		mg/Kg		95	70 - 130	

QC Sample Results

Client: Ensolum Job ID: 890-3345-1 SDG: 03A1987053 Project/Site: EP USA 3

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

Lab Sample ID: 880-21034-A-1-D MS

Matrix: Solid

Analysis Batch: 38810

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

Prep Batch: 38531

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00200	U	0.0998	0.09480		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1656		mg/Kg		83	70 - 130	
o-Xylene	<0.00200	U	0.0998	0.08467		mg/Kg		85	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	125	70 - 130
1,4-Difluorobenzene (Surr)	95	70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 38531

Matrix: Solid

Lab Sample ID: 880-21034-A-1-E MSD

Analysis Batch: 38810

_	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U *- F1	0.101	0.06518	F1	mg/Kg		65	70 - 130	21	35
Toluene	<0.00200	U	0.101	0.08003		mg/Kg		79	70 - 130	17	35
Ethylbenzene	<0.00200	U	0.101	0.08173		mg/Kg		81	70 - 130	15	35
m-Xylene & p-Xylene	<0.00401	U	0.202	0.1444		mg/Kg		72	70 - 130	14	35
o-Xylene	<0.00200	U	0.101	0.07673		mg/Kg		76	70 - 130	10	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits		
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130		
1,4-Difluorobenzene (Surr)	92		70 - 130		

Lab Sample ID: MB 880-38855/5-A

Matrix: Solid

Analysis Batch: 38810

Client Sam	ole ID:	Method Blank	
	D	Towns Take I/NIA	

Prep Type: Total/NA

Prep Batch: 38855

	МВ	мв							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/07/22 11:02	11/07/22 14:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/07/22 11:02	11/07/22 14:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/07/22 11:02	11/07/22 14:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/07/22 11:02	11/07/22 14:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/07/22 11:02	11/07/22 14:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/07/22 11:02	11/07/22 14:38	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84	70 - 130	11/07/22 11:02	11/07/22 14:38	1
1,4-Difluorobenzene (Surr)	101	70 - 130	11/07/22 11:02	11/07/22 14:38	1

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

Lab Sample ID: MB 880-38587/1-A

Matrix: Solid

Analysis Batch: 38572

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38587

	MB	МВ	лв								
Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac			
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		11/03/22 08:39	11/03/22 22:42	1			

(GRO)-C6-C10

 Client: Ensolum
 Job ID: 890-3345-1

 Project/Site: EP USA 3
 SDG: 03A1987053

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

Lab Sample ID: MB 880-38587/1-A

Matrix: Solid

Analysis Batch: 38572

MB MB

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38587

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/03/22 08:39	11/03/22 22:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/03/22 08:39	11/03/22 22:42	1
	МВ	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130				11/03/22 08:39	11/03/22 22:42	1
o-Terphenyl	105		70 - 130				11/03/22 08:39	11/03/22 22:42	1

Lab Sample ID: LCS 880-38587/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA Analysis Batch: 38572 Prep Batch: 38587 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1017 102 70 - 130 mg/Kg (GRO)-C6-C10 1000 946.9 Diesel Range Organics (Over mg/Kg 95 70 - 130 C10-C28) LCS LCS

 Surrogate
 %Recovery
 Qualifier
 Limits

 1-Chlorooctane
 82
 70 - 130

 o-Terphenyl
 96
 70 - 130

Lab Sample ID: LCSD 880-38587/3-A

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 38572

Spike LCSD LCSD %Rec RPD

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1113		mg/Kg		111	70 - 130	9	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1149		mg/Kg		115	70 - 130	19	20
C10-C28)									

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 880-21018-A-1-D MS

Matrix: Solid

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

Analysis Batch: 38572 Prep Batch: 38587

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	997	1234		mg/Kg		122	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	997	975.4		mg/Kg		98	70 - 130	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							

 Surrogate
 %Recovery
 Qualifier
 Limits

 1-Chlorooctane
 80
 70 - 130

 o-Terphenyl
 82
 70 - 130

Eurofins Carlsbad

3

5

7

a

11

13

14

Released to Imaging: 5/17/2023 8:58:09 AM

Client: Ensolum Job ID: 890-3345-1 Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: 880-21018-A-1-E MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA Analysis Batch: 38572 Prep Batch: 38587

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	<50.0	U F2	999	867.6	F2	mg/Kg		85	70 - 130	35	20	
(GRO)-C6-C10												
Diesel Range Organics (Over	<50.0	U	999	954.1		mg/Kg		96	70 - 130	2	20	
	Gasoline Range Organics (GRO)-C6-C10	Analyte Result Gasoline Range Organics <50.0 (GRO)-C6-C10	Analyte Result Qualifier Gasoline Range Organics <50.0 U F2 (GRO)-C6-C10	AnalyteResultQualifierAddedGasoline Range Organics<50.0	AnalyteResultQualifierAddedResultGasoline Range Organics<50.0	AnalyteResultQualifierAddedResultQualifierGasoline Range Organics<50.0	AnalyteResultQualifierAddedResultQualifierUnitGasoline Range Organics<50.0	AnalyteResult Gasoline Range OrganicsQualifierQualifierAddedResult 999QualifierUnitD(GRO)-C6-C10V F2999867.6F2mg/Kg	AnalyteResultQualifierAddedResultQualifierUnitD%RecGasoline Range Organics<50.0	AnalyteResult Gasoline Range OrganicsQualifierAddedResult 999QualifierUnitD%RecLimitsGRO)-C6-C10V F2999867.6F2mg/Kg8570 - 130	AnalyteResultQualifierAddedResultQualifierUnitD%RecLimitsRPDGasoline Range Organics<50.0	Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Gasoline Range Organics <50.0 U F2 999 867.6 F2 mg/Kg 85 70 - 130 35 20 (GRO)-C6-C10

C10-C28)

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	80		70 - 130
o-Terphenyl	78		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38446/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38534

MB MB

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 U	5.00	mg/Kg			11/02/22 14:38	1

Lab Sample ID: LCS 880-38446/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38534

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	 250	266.4		mg/Kg		107	90 - 110	

Lab Sample ID: LCSD 880-38446/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38534

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	262.4		ma/Ka		105	90 110		20	

Lab Sample ID: 890-3341-A-4-C MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38534

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	<4 96	U	248	251 9		ma/Ka	_	101	90 110	

Lab Sample ID: 890-3341-A-4-D MSD

Matrix: Solid

Analysis Batch: 38534

Analysis Dateil. 30334											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	<4.96	U	248	259.6		mg/Kg		104	90 - 110	3	20

Eurofins Carlsbad

Prep Type: Soluble

Client Sample ID: Matrix Spike Duplicate

QC Association Summary

 Client: Ensolum
 Job ID: 890-3345-1

 Project/Site: EP USA 3
 SDG: 03A1987053

GC VOA

Prep Batch: 38531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3345-1	SW01	Total/NA	Solid	5035	
MB 880-38531/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38531/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38531/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21034-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-21034-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 38810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3345-1	SW01	Total/NA	Solid	8021B	38531
MB 880-38531/5-A	Method Blank	Total/NA	Solid	8021B	38531
MB 880-38855/5-A	Method Blank	Total/NA	Solid	8021B	38855
LCS 880-38531/1-A	Lab Control Sample	Total/NA	Solid	8021B	38531
LCSD 880-38531/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38531
880-21034-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	38531
880-21034-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	38531

Prep Batch: 38855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38855/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 39007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3345-1	SW01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 38572

Lab Sample ID 890-3345-1	Client Sample ID SW01	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 38587
MB 880-38587/1-A	Method Blank	Total/NA	Solid	8015B NM	38587
LCS 880-38587/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38587
LCSD 880-38587/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38587
880-21018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	38587
880-21018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38587

Prep Batch: 38587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3345-1	SW01	Total/NA	Solid	8015NM Prep	
MB 880-38587/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38587/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38587/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-21018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-21018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 38733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3345-1	SW01	Total/NA	Solid	8015 NM	

QC Association Summary

 Client: Ensolum
 Job ID: 890-3345-1

 Project/Site: EP USA 3
 SDG: 03A1987053

HPLC/IC

Leach Batch: 38446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3345-1	SW01	Soluble	Solid	DI Leach	
MB 880-38446/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38446/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38446/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3341-A-4-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3341-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 38534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3345-1	SW01	Soluble	Solid	300.0	38446
MB 880-38446/1-A	Method Blank	Soluble	Solid	300.0	38446
LCS 880-38446/2-A	Lab Control Sample	Soluble	Solid	300.0	38446
LCSD 880-38446/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38446
890-3341-A-4-C MS	Matrix Spike	Soluble	Solid	300.0	38446
890-3341-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38446

2

3

5

7

8

9

10

12

13

14

Lab Chronicle

Client: Ensolum Job ID: 890-3345-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: SW01 Lab Sample ID: 890-3345-1

Matrix: Solid

Date Collected: 10/31/22 11:40 Date Received: 11/01/22 12:43

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	38531	11/02/22 15:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38810	11/08/22 09:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39007	11/08/22 13:40	AJ	EET MID
Total/NA	Analysis	8015 NM		1			38733	11/04/22 11:23	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38587	11/03/22 08:39	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38572	11/04/22 03:25	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	38446	11/02/22 08:10	СН	EET MID
Soluble	Analysis	300.0		1			38534	11/02/22 16:33	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 Job ID: 890-3345-1
Project/Site: EP USA 3 SDG: 03A1987053

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 by	it the leberatory is not contiffi	iad butba gaugeming authority. This list ma		
the agency does not of	' '	it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for v	
,	' '	Matrix	Analyte	ay include analytes for v	
the agency does not of	fer certification.	•	, , ,	ay include analytes for v	

4

5

7

q

10

12

13

14

Method Summary

Job ID: 890-3345-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

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: EP USA 3

Job ID: 890-3345-1 SDG: 03A1987053

Lab Sample ID Client Sample ID Matrix Collected Received Depth 890-3345-1 SW01 Solid 10/31/22 11:40 11/01/22 12:43 0-3'

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

eurofins		Environment Testing Xenco	Houston, Midland, TX EL Paso, T Hobbs, NN	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Work Order No:	com Page / of /
Project Manager:	Ben Belill		Bill to: (if different)	Jim Raley	Work Or	Comments
	Ensolum		Company Name:	WPX	Program: UST/PST PRP Brownfields RRC	Brownfields ☐ RRC ☐ Superfund ☐
	3122 National Parks HWY	NY	Address:	5315 Buena Vista Dr.	State of Project:	
e ZIP:	Carlsbad, NM 88220		City, State ZIP:	Carlsbad, NM 88220	Reporting: Level II PST/UST TRRP	PST/UST TRRP Level IV
	989-854-0852	Er	Email: BBelill@Ensolum.com,	om, jim raley@dvn.com	Deliverables: EDD	ADaPT Other:
Project Name:	EP USA 3		Turn Around		ANALYSIS REQUEST	Preservative Codes
Project Number:	03A1987053	✓ Routine	ne Rush Code			None: NO DI Water: H ₂ O
Project Location:	Eddy County, NM	IM Due Date:	5 Day TAT			Cool: Cool MeOH: Me
Sampler's Name:	Gilbert Moreno		le c			
CC#:	1061155101	the lab,	_			H ₂ S0 ₄ : H ₂ NaOH: Na
SAMPLE RECEIPT	Temp Blank:	We No Wet loe:	e. Yes No	.0)		H ₃ PO ₄ : HP
Samples Received Intact:	No No	Thermometer ID:	770-007	: 300		NaHSO ₄ : NABIS
Cooler Custody Seals:	Yes No MAN	Correction Factor:	1.0			Na ₂ S ₂ O ₃ : NaSO ₃
Sample Custody Seals:	Yes No NIX	Temperature Reading:			of Custody	Zn Acetate+NaOH: Zn
I otal Containers:		Date Time	Grab/ # of	EX (80)		Sample Comments
SW01	S	10.31.22 11:40	0-3' Comp 1	×		
						Incident Numbers
						NAB1622531873
	0	1.1.2	2,4			
	Mon	6				
Total 200.7 / 6010	10 200.8 / 6020:	8RCRA	13PPM Texas 11 AI	Sb As Ba Be B Cd Ca Cr Co Cu Fe Sb As Ba Be Cd Cr Co Cu Pb Mn	e Pb Mg Mn Mo Ni K Se Ag SiO ₂ Mo Ni Se Ag Ti U Hg: 163	e Ag SiO ₂ Na Sr Ti Sn U V Zn Hg: 1631/245.1/7470/7471
Chec meanada) an	Choic menerale) and menale) to be analy-ex				· ·	
Notice: Signature of this do of service. Eurofins Xenco of Eurofins Xenco. A minir	ocument and relinquishment on will be liable only for the cost mum charge of \$85.00 will be a	of samples constitutes a t of samples and shall no applied to each project a	valid purchase order from clie t assume any responsibility fo id a charge of \$6 for each san	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco, A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	ractors. It assigns standard terms and conditio osses are due to circumstances beyond the con ie terms will be enforced unless previously nego	ns trol triated.
Relinquished by: (Signature)	(Signature)	Received by: (Signature)	gnature)	Date/Time Relinquished by: (Signature)	ignature) Received by: (Signature))nature) Date∕Time
Colo	Marian	en la S.	fut - II	Mas 1248		
n G			,	o [:		

Revised Date: 08/25/2020 Rev. 2020 2

11/8/2022

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3345-1 SDG Number: 03A1987053

Login Number: 3345 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3345-1 SDG Number: 03A1987053

Login Number: 3345 **List Source: Eurofins Midland** List Number: 2

List Creation: 11/02/22 11:49 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

ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team Ensolum 705 W. Wadley Suite 210 Midland Texas 79701

Generated 11/16/2022 3:05:56 PM Revision 1

JOB DESCRIPTION

EP USA 3 SDG NUMBER 03A1987053

JOB NUMBER

890-3346-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM88220



Client: Ensolum
Project/Site: EP USA 3
Laboratory Job ID: 890-3346-1
SDG: 03A1987053

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	6
QC Sample Results	7
QC Association Summary	13
Lab Chronicle	15
Certification Summary	16
Method Summary	17
Sample Summary	18
Chain of Custody	19
Receipt Checklists	20
Annendix	22

4

6

8

10

11

13

14

15

Definitions/Glossary

Client: Ensolum Job ID: 890-3346-1 Project/Site: EP USA 3 SDG: 03A1987053

Qualifiers

GC VOA

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

F2 MS/MSD RPD exceeds control limits

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

GC Semi VOA

Qualifier **Qualifier Description**

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

HPLC/IC

Qualifier **Qualifier Description**

U Indicates the analyte was analyzed for but not detected.

Glossary

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

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

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

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)

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

MDC Minimum Detectable Concentration (Radiochemistry)

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

Method Quantitation Limit MQL

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit PQL

PRES Presumptive QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Project/Site: EP USA 3

Job ID: 890-3346-1

SDG: 03A1987053

Job ID: 890-3346-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3346-1

REVISION

The report being provided is a revision of the original report sent on 11/8/2022. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Report revision history

Receipt

The sample was received on 11/1/2022 12:43 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: SW02 (890-3346-1).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-38465 and analytical batch 880-38581 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-20981-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-39514 and analytical batch 880-39389 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.

HPLC/IC

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

3

4

9

10

12

IJ

4 .

15

Matrix: Solid

Lab Sample ID: 890-3346-1

Client: Ensolum Job ID: 890-3346-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: SW02

Date Collected: 10/31/22 11:50 Date Received: 11/01/22 12:43

Sample Depth: 0-3'

Chloride

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 16:08	
Toluene	< 0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 16:08	
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 16:08	
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/02/22 15:00	11/03/22 16:08	
o-Xylene	< 0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 16:08	
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/02/22 15:00	11/03/22 16:08	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	105		70 - 130				11/02/22 15:00	11/03/22 16:08	
1,4-Difluorobenzene (Surr)	110		70 - 130				11/02/22 15:00	11/03/22 16:08	
Method: TAL SOP Total BTEX	(- Total BTE	X Calculat	ion						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX Method: SW846 8015 NM - Di	_	Organics (, , ,		mg/Kg			11/03/22 16:34	
Method: SW846 8015 NM - Di Analyte	esel Range (MDL	Unit	<u>D</u>	Prepared	11/03/22 16:34 Analyzed 11/04/22 11:23	
Method: SW846 8015 NM - Di Analyte Total TPH	esel Range (Result	Organics (Qualifier	DRO) (GC) RL 49.8	MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I	esel Range (Result 194 Diesel Range	Organics (Qualifier Organics	DRO) (GC) RL 49.8 (DRO) (GC)		Unit mg/Kg			Analyzed 11/04/22 11:23	Dil Fac
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte	esel Range (Result 194 Diesel Range Result	Organics (Qualifier Organics Qualifier Qualifier	DRO) (GC) RL 49.8 (DRO) (GC) RL	MDL MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 11/04/22 11:23 Analyzed	Dil Fac
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I	esel Range (Result 194 Diesel Range	Organics (Qualifier Organics Qualifier Qualifier	DRO) (GC) RL 49.8 (DRO) (GC)		Unit mg/Kg			Analyzed 11/04/22 11:23	Dil Fac
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics	esel Range (Result 194 Diesel Range Result	Organics (Qualifier Organics Qualifier Qualifier	DRO) (GC) RL 49.8 (DRO) (GC) RL		Unit mg/Kg		Prepared	Analyzed 11/04/22 11:23 Analyzed	Dil Fac
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	esel Range (Result 194 Diesel Range Result 49.8	Organics (Qualifier Organics Qualifier U	DRO) (GC) RL 49.8 (DRO) (GC) RL 49.8		Unit mg/Kg Unit mg/Kg		Prepared 11/14/22 14:24	Analyzed 11/04/22 11:23 Analyzed 11/15/22 02:56 11/15/22 02:56	Dil Fac
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	esel Range (Result 194 Diesel Range Result < 49.8	Organics (Qualifier Organics Qualifier U	DRO) (GC) RL 49.8 (DRO) (GC) RL 49.8 49.8 49.8 Limits		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 11/14/22 14:24 11/14/22 14:24 11/14/22 14:24 Prepared	Analyzed 11/04/22 11:23 Analyzed 11/15/22 02:56 11/15/22 02:56 Analyzed	Dil Fac
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	esel Range (Result 194 Diesel Range Result 49.8 194 49.8 %Recovery 109	Organics (Qualifier Organics Qualifier U	DRO) (GC) RL 49.8 (DRO) (GC) RL 49.8 49.8 49.8		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 11/14/22 14:24 11/14/22 14:24 11/14/22 14:24	Analyzed 11/04/22 11:23 Analyzed 11/15/22 02:56 11/15/22 02:56 11/15/22 02:56	Dil Fa
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	esel Range (Result 194 Diesel Range Result <49.8 194 <49.8 %Recovery	Organics (Qualifier Organics Qualifier U	DRO) (GC) RL 49.8 (DRO) (GC) RL 49.8 49.8 49.8 Limits		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 11/14/22 14:24 11/14/22 14:24 11/14/22 14:24 Prepared	Analyzed 11/04/22 11:23 Analyzed 11/15/22 02:56 11/15/22 02:56 Analyzed	Dil Fa
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	esel Range (Result 194 Diesel Range Result 49.8 194 49.8 %Recovery 109 108	Organics (Qualifier Organics Qualifier U	DRO) (GC) RL 49.8 (DRO) (GC) RL 49.8 49.8 49.8 Limits 70 - 130 70 - 130		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 11/14/22 14:24 11/14/22 14:24 11/14/22 14:24 Prepared 11/14/22 14:24	Analyzed 11/04/22 11:23 Analyzed 11/15/22 02:56 11/15/22 02:56 Analyzed 11/15/22 02:56	Dil Fa

25.0

mg/Kg

145

Eurofins Carlsbad

11/05/22 21:29

5

Surrogate Summary

Client: Ensolum Job ID: 890-3346-1 Project/Site: EP USA 3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-20981-A-1-B MS	Matrix Spike	91	93	 	
880-20981-A-1-C MSD	Matrix Spike Duplicate	46 S1-	71		
890-3346-1	SW02	105	110		
LCS 880-38465/1-A	Lab Control Sample	95	99		
LCSD 880-38465/2-A	Lab Control Sample Dup	98	94		
MB 880-38465/5-A	Method Blank	98	91		
Surrogate Legend					

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

Matrix: Solid Prep Type: Total/NA

			Percent	Surrogate Recovery (Acceptance Limits
		1CO1	OTPH1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-3346-1	SW02	109	108	
90-3393-A-1-C MS	Matrix Spike	88	85	
90-3393-A-1-D MSD	Matrix Spike Duplicate	95	90	
90-3429-A-1-E MS	Matrix Spike	103	90	
0-3429-A-1-F MSD	Matrix Spike Duplicate	115	102	
CS 880-39001/2-A	Lab Control Sample	109	119	
CS 880-39514/2-A	Lab Control Sample	90	92	
CSD 880-39001/3-A	Lab Control Sample Dup	100	108	
.CSD 880-39514/3-A	Lab Control Sample Dup	91	91	
/IB 880-39001/1-A	Method Blank	99	114	
ИВ 880-39514/1-A	Method Blank	98	107	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum Job ID: 890-3346-1 Project/Site: EP USA 3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-38465/5-A

Matrix: Solid

Analysis Batch: 38581

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38465

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/02/22 15:00	11/03/22 10:56	1

MB MB

Surrogate	%Recovery C	Qualifier Lim	its	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98	70 -	130	11/02/22 15:00	11/03/22 10:56	1
1,4-Difluorobenzene (Surr)	91	70 -	130	11/02/22 15:00	11/03/22 10:56	1

Lab Sample ID: LCS 880-38465/1-A

Matrix: Solid

Analysis Batch: 38581

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38465

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07921		mg/Kg		79	70 - 130	
Toluene	0.100	0.08140		mg/Kg		81	70 - 130	
Ethylbenzene	0.100	0.08324		mg/Kg		83	70 - 130	
m-Xylene & p-Xylene	0.200	0.1632		mg/Kg		82	70 - 130	
o-Xylene	0.100	0.09295		mg/Kg		93	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	95	70 - 130
1,4-Difluorobenzene (Surr)	99	70 - 130

Lab Sample ID: LCSD 880-38465/2-A

Matrix: Solid

Analysis Batch: 38581

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 38465

	Spike	LCSD L	.CSD				%Rec		RPD
Analyte	Added	Result Q	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08528		mg/Kg		85	70 - 130	7	35
Toluene	0.100	0.08804		mg/Kg		88	70 - 130	8	35
Ethylbenzene	0.100	0.09032		mg/Kg		90	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1781		mg/Kg		89	70 - 130	9	35
o-Xylene	0.100	0.1002		mg/Kg		100	70 - 130	8	35

LCSD LCSD

Sample Sample

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1.4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-20981-A-1-B MS

Matrix: Solid

Analysis Batch: 38581

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

Prep Batch: 38465

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

Analyte Result Qualifier <0.00202 UF1F2 mg/Kg Benzene 0.0990 0.07448 74 70 - 130 Toluene <0.00202 UF1 0.0990 0.07129 mg/Kg 72 70 - 130

Client: Ensolum Job ID: 890-3346-1 SDG: 03A1987053 Project/Site: EP USA 3

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

Lab Sample ID: 880-20981-A-1-B MS **Client Sample ID: Matrix Spike Matrix: Solid Prep Type: Total/NA**

Prep Batch: 38465 **Analysis Batch: 38581** MS MS %Rec Sample Sample Spike

Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00202	U F1 F2	0.0990	0.06359	F1	mg/Kg		64	70 - 130	
m-Xylene & p-Xylene	0.00417	F1 F2	0.198	0.1265	F1	mg/Kg		62	70 - 130	
o-Xylene	<0.00202	U F1 F2	0.0990	0.06683	F1	mg/Kg		67	70 - 130	

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 70 - 130 91 1,4-Difluorobenzene (Surr) 70 - 130 93

Lab Sample ID: 880-20981-A-1-C MSD **Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA**

Matrix: Solid

Prep Batch: 38465 **Analysis Batch: 38581** Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Analyte <0.00202 U F1 F2 0.0994 0.03522 F1 F2 34 70 - 130 72 35 Benzene mg/Kg Toluene 0.0994 53 70 - 130 30 35 <0.00202 UF1 0.05260 F1 mg/Kg Ethylbenzene <0.00202 U F1 F2 0.0994 0.03748 F1 F2 mg/Kg 38 70 - 130 52 35 m-Xylene & p-Xylene 0.199 0.06178 F1 F2 29 70 - 130 69 35 0.00417 F1 F2 mq/Kq 0.0994 33 o-Xylene <0.00202 U F1 F2 0.03257 F1 F2 mg/Kg 70 - 13069

MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) S1-70 - 130 46 1,4-Difluorobenzene (Surr) 71 70 - 130

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

Lab Sample ID: MB 880-39001/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 38944** Prep Batch: 39001

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac <50.0 U 50.0 11/08/22 13:32 11/08/22 20:25 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 50.0 11/08/22 13:32 11/08/22 20:25 mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 mg/Kg 11/08/22 13:32 11/08/22 20:25

MB MB Surrogate %Recovery Qualifier Limits Prepared Dil Fac Analyzed 11/08/22 13:32 11/08/22 20:25 1-Chlorooctane 70 - 130 99 70 - 130 11/08/22 13:32 11/08/22 20:25 o-Terphenyl 114

Lab Sample ID: LCS 880-39001/2-A **Client Sample ID: Lab Control Sample**

Matrix: Solid Prep Type: Total/NA **Analysis Batch: 38944** Prep Batch: 39001

	Бріке	LUS	LCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	1000	972.6		mg/Kg		97	70 - 130		-
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1026		mg/Kg		103	70 - 130		
C10-C28)									

Client: Ensolum Job ID: 890-3346-1 SDG: 03A1987053 Project/Site: EP USA 3

Limits

70 - 130

70 - 130

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

LCS LCS %Recovery Qualifier

Lab Sample ID: LCS 880-39001/2-A

Matrix: Solid

Surrogate

Analysis Batch: 38944

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39001

1-Chlorooctane 109 o-Terphenyl 119

Lab Sample ID: LCSD 880-39001/3-A

Matrix: Solid

Analysis Batch: 38944

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39001

LCSD LCSD RPD %Rec Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 826.3 mg/Kg 83 70 - 130 16 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 911.4 mg/Kg 91 70 - 130 12 20 C10-C28)

LCSD LCSD

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

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39001

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier Limits **Analyte** Unit D %Rec <50.0 U Gasoline Range Organics 997 946.6 mg/Kg 92 70 - 130 (GRO)-C6-C10 997 Diesel Range Organics (Over <50.0 U 808.4 mg/Kg 81 70 - 130 C10-C28)

Matrix: Solid

Analysis Batch: 38944

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 88 o-Terphenyl 85 70 - 130

Lab Sample ID: 890-3393-A-1-D MSD

Lab Sample ID: 890-3393-A-1-C MS

Analysis Batch: 38944

Matrix: Solid

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

Prep Batch: 39001

%Rec **RPD**

Sample Sample Spike MSD MSD Result Qualifier Added Result Qualifier Limits **RPD** Limit **Analyte** Unit %Rec Gasoline Range Organics <50.0 U 999 1139 111 70 - 130 18 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 999 855.3 mg/Kg 86 70 - 130 6 20

C10-C28)

MSD MSD

%Recovery Qualifier Limits Surrogate 1-Chlorooctane 95 70 - 130 o-Terphenyl 90 70 - 130

Client: Ensolum Job ID: 890-3346-1 Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: MB 880-39514/1-A

Matrix: Solid

Analysis Batch: 39389

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39514

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/14/22 14:24	11/14/22 20:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/14/22 14:24	11/14/22 20:26	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/14/22 14:24	11/14/22 20:26	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	11/14/22 14:24	11/14/22 20:26	1
o-Terphenyl	107		70 - 130	11/14/22 14:24	11/14/22 20:26	1

Client Sample ID: Lab Control Sample

Prep Batch: 39514

Lab Sample ID: LCS 880-39514/2-A **Matrix: Solid Prep Type: Total/NA Analysis Batch: 39389** Spike LCS LCS %Rec

Analyte Added Result Qualifier Unit Limits D %Rec 1000 1060 106 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 937.0 94 mg/Kg 70 - 130C10-C28)

LCS LCS

Lab Sample ID: LCSD 880-39514/3-A

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	92		70 - 130

Client Sample ID: Lab Control Sample Dup

Matrix: Solid Prep Type: Total/NA **Analysis Batch: 39389** Prep Batch: 39514

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier RPD Limit Analyte Unit Limits D %Rec Gasoline Range Organics 1000 1076 mg/Kg 108 70 - 130 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 934.9 mg/Kg 93 70 - 130 20

C10-C28)

LCSD LCSD

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

Lab Sample ID: 890-3429-A-1-E MS **Client Sample ID: Matrix Spike Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 39389

Analysis Batch: 39389									Prep E	Batch: 39514
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	997	1209		mg/Kg		120	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1026		mg/Kg		103	70 - 130	

Job ID: 890-3346-1 SDG: 03A1987053

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

Lab Sample ID: 890-3429-A-1-E MS Client Sample ID: Matrix Spike

Matrix: Solid

Client: Ensolum

Project/Site: EP USA 3

Analysis Batch: 39389

Prep Type: Total/NA Prep Batch: 39514

MS MS %Recovery Qualifier Limits Surrogate 1-Chlorooctane 103 70 - 130 o-Terphenyl 90 70 - 130

Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 39389

Lab Sample ID: 890-3429-A-1-F MSD

Prep Type: Total/NA

Prep Batch: 39514

Prep Type: Soluble

MSD MSD %Rec **RPD** Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics <50.0 U F1 999 1387 F1 mg/Kg 137 70 - 130 14 20 (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 999 1164 mg/Kg 117 70 - 130 13 20 C10-C28) MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 115 70 - 130

Method: 300.0 - Anions, Ion Chromatography

102

Lab Sample ID: MB 880-38521/1-A **Client Sample ID: Method Blank Prep Type: Soluble**

70 - 130

Matrix: Solid

o-Terphenyl

Analysis Batch: 38782

MB MB

RL Analyte Result Qualifier **MDL** Unit Prepared Analyzed Dil Fac 5.00 Chloride <5.00 U 11/05/22 18:57 mg/Kg

Lab Sample ID: LCS 880-38521/2-A Client Sample ID: Lab Control Sample

Matrix: Solid

Analysis Batch: 38782

Spike LCS LCS %Rec Analyte Added Result Qualifier D %Rec Limits Unit 250 104 Chloride 260.8 mg/Kg 90 - 110

Lab Sample ID: LCSD 880-38521/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38782

Spike LCSD LCSD %Rec **RPD** Added Analyte Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 263.3 mg/Kg 105 90 - 110

Lab Sample ID: 880-21018-A-2-B MS **Client Sample ID: Matrix Spike Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38782

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 97.7 249 90 - 110 343.7 mg/Kg 99

QC Sample Results

Client: Ensolum Job ID: 890-3346-1 Project/Site: EP USA 3 SDG: 03A1987053

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-21018-A-2-C MSD **Client Sample ID: Matrix Spike Duplicate Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38782

Alialysis Datcil. 30702											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	97.7		249	340.4		mg/Kg		97	90 - 110	1	20

QC Association Summary

Client: Ensolum Job ID: 890-3346-1 Project/Site: EP USA 3 SDG: 03A1987053

GC VOA

Prep Batch: 38465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3346-1	SW02	Total/NA	Solid	5035	
MB 880-38465/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38465/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38465/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20981-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-20981-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 38581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3346-1	SW02	Total/NA	Solid	8021B	38465
MB 880-38465/5-A	Method Blank	Total/NA	Solid	8021B	38465
LCS 880-38465/1-A	Lab Control Sample	Total/NA	Solid	8021B	38465
LCSD 880-38465/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38465
880-20981-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	38465
880-20981-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	38465

Analysis Batch: 38672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3346-1	SW02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 38734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3346-1	SW02	Total/NA	Solid	8015 NM	

Analysis Batch: 38944

Lab Sample ID MB 880-39001/1-A	Client Sample ID Method Blank	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 39001
LCS 880-39001/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	39001
LCSD 880-39001/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	39001
890-3393-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	39001
890-3393-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	39001

Prep Batch: 39001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Pre	p Batch
MB 880-39001/1-A	Method Blank	Total/NA	Solid	8015NM Prep	<u>·</u>
LCS 880-39001/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-39001/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3393-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3393-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 39389

Lab Sample ID 890-3346-1	Client Sample ID SW02	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 39514
MB 880-39514/1-A	Method Blank	Total/NA	Solid	8015B NM	39514
LCS 880-39514/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	39514
LCSD 880-39514/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	39514
890-3429-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	39514
890-3429-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	39514

QC Association Summary

 Client: Ensolum
 Job ID: 890-3346-1

 Project/Site: EP USA 3
 SDG: 03A1987053

GC Semi VOA

Prep Batch: 39514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3346-1	SW02	Total/NA	Solid	8015NM Prep	
MB 880-39514/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-39514/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-39514/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3429-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3429-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 38521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3346-1	SW02	Soluble	Solid	DI Leach	
MB 880-38521/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38521/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38521/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-21018-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-21018-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 38782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3346-1	SW02	Soluble	Solid	300.0	38521
MB 880-38521/1-A	Method Blank	Soluble	Solid	300.0	38521
LCS 880-38521/2-A	Lab Control Sample	Soluble	Solid	300.0	38521
LCSD 880-38521/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38521
880-21018-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	38521
880-21018-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38521

Eurofins Carlsbad

2

4

_

7

10

13

14

15

Lab Chronicle

Client: Ensolum Job ID: 890-3346-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: SW02 Lab Sample ID: 890-3346-1 Date Collected: 10/31/22 11:50

Matrix: Solid

Date Received: 11/01/22 12:43

	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	38465	11/02/22 15:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38581	11/03/22 16:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38672	11/03/22 16:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			38734	11/04/22 11:23	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	39514	11/14/22 14:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39389	11/15/22 02:56	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	38521	11/02/22 14:40	CH	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	38782	11/05/22 21:29	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 Job ID: 890-3346-1 Project/Site: EP USA 3 SDG: 03A1987053

Laboratory: Eurofins Midland

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

Authority Texas		ogram ELAP	Identification Number	Expiration Date 06-30-23
The following analyte	•	ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for
J -,	oner certification.			
Analysis Method	Prep Method	Matrix	Analyte	
0 ,		Matrix Solid	Analyte Total TPH	

3

6

8

10

13

14

15

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

Method Summary

Client: Ensolum Project/Site: EP USA 3

Method

Total BTEX

8015 NM

8015B NM

8015NM Prep

DI Leach

300.0

5035

8021B

Job ID: 890-3346-1

SDG: 03A1987053

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

EET MID **EET MID**

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: EP USA 3

Job ID: 890-3346-1

SDG: 03A1987053

Lab Sample ID Client Sample ID Collected Matrix Received Depth 890-3346-1 SW02 Solid 10/31/22 11:50 11/01/22 12:43 0-3'

Relinquished by: (Signature)

weeka

ERIT

ST PS

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date: 08/25/2020 Rev. 2020 2

Received by: (Signature)

eurofins

Environment Testing

Chain of Custody

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

	Environment lesting	int lesting	Midland, T	X (432	704-5	440. S	an Anto	Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	Work Order No:	/20
	Xenco		EL Paso Hobbs, I	, TX (9: VM (57:	15) 585 5) 392-	-3443, 7550, (Lubbo	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	www.xenco.com Page	그 그 11/16/
Project Manager:	Ben Belill		Bill to: (if different)	ي.	Jim Raley	ey			Con	
	Ensolum		Company Name:	5	WPX				Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund [℃ Superfund
	3122 National Parks HWY		Address:	5	5315 Buena Vista Dr.	Jena V	ista D		State of Project:	
le ZIP:	Carlsbad, NM 88220		City, State ZIP:	C	Carlsbad, NM 88220	d. NM	88220		Reporting: Level II Level III PST/UST TRRP	RP Level IV
	989-854-0852	Email:	Email: BBelill@Ensolum.comjim.raley@dvn.com	1.com	jim.ra	aley@	dvn.c		Deliverables: EDD ADaPT Ot	Other:
Project Name:	EP USA 3	Turn	Turn Around					ANALYSIS REQUEST		Preservative Codes
Project Number:	03A1987053	☑ Routine		Pres. Code					None: NO	DI Water: H ₂ O
Project Location:	Eddy County, NM	Due Date:	5 Day TAT						Cool: Cool	MeOH: Me
Sampler's Name:	Gilbert Moreno	TAT starts the	TAT starts the day received by						HCI: HC	HNO3: HN
CC#:	1061155101	the lab, if rec	the lab, if received by 4:30pm	ers		_			H ₂ VO ₄ . H ₂	NaOH: Na
SAMPLE RECEIPT	Temp Blank: Tes	s) No Wet Ice:	No No	mete	0.0}				H ₃ PO ₄ : HP	5
Samples Received Intact:	Yes No	Thermometer ID:	103-007		: 30				NaHoO4: NABIO	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	W.		(EP			Chain o	Zn Acetate+NaOH: Zn	
Total Containers:		Corrected Temperature:	30)15)	8021		NaOH+Asco	NaOH+Ascorbic Acid: SAPC
Sample identification	Matrix	Date Time Sampled Sampled	Depth Grab/ # of Comp Cont		CHLOR	TPH (8	BTEX (Samp	Sample Comments Page
SW02	S	10.31.22 11:50	0-3' Comp		×	×	×			
									Incid	Incident Numbers
					1	1	1		NAB	NAB1622531873
				1		_				
	A	11.17		-		-				
	O Sign	+		-						
				+	-		\perp			50
				+	-	-	4			2 0.
	Н		11 1		•				Ma Ma Ni K Sa As SiO Na St Ti	11 1/ 75
Total 200.7 / 6010 Circle Method(s) and I	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	8RCRA 13F	CRA 13PPM Texas 11 Al Sb		As b As	Ba Be Ba Be	е В с	Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb N Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni	Mo Ni Se Ag TIU Hg: 1631/245.1/7470/7471	0 / 7471 0 / 7471
Notice: Signature of this d	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors.	nples constitutes a valid	purchase order from c	ient cor	npany t	o Euro	ins Xen	, its affiliates and subcontractors.	It assigns standard terms and conditions	
of Eurofins Xenco. A mini	num charge of \$85.00 will be applic	ed to each project and a c	charge of \$5 for each s	ample s	ubmitte	d to Eu	ofins X	ico, but not analyzed. These terms v	of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3346-1 SDG Number: 03A1987053

Login Number: 3346 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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

11/16/2022 (Rev. 1)

Page 20 of 22

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3346-1 SDG Number: 03A1987053

Login Number: 3346 **List Source: Eurofins Midland** List Creation: 11/02/22 11:49 AM List Number: 2

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	

Eurofins Carlsbad

<6mm (1/4").

Eurofins Carlsbad

Job Notes

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

Authorization

Generated 11/16/2022 3:05:56 PM Revision 1

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

ANALYTICAL REPORT

Environment Testing

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

Laboratory Job ID: 890-3347-1

Laboratory Sample Delivery Group: 03A1987053

Client Project/Site: EP USA 3

For:

🛟 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Devon Team

RAMER

Authorized for release by: 11/8/2022 1:39:42 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Have a Question?

EOL

.....LINKS

Review your project results through

Visit us at:

www.eurofinsus.com/Env Released to Imaging: 5/17/2023 8:58:09 AM

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

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

Client: Ensolum
Project/Site: EP USA 3
Laboratory Job ID: 890-3347-1
SDG: 03A1987053

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	6
QC Sample Results	7
QC Association Summary	11
Lab Chronicle	13
Certification Summary	14
Method Summary	15
Sample Summary	16
Chain of Custody	17
Receipt Checklists	18

__

3

4

6

8

10

12

13

Definitions/Glossary

Client: Ensolum Job ID: 890-3347-1 Project/Site: EP USA 3 SDG: 03A1987053

Qualifiers

CC	$V \cap A$
u	VUA

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

GC Semi VOA

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

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

Glossarv

ND

NEG

POS

PQL **PRES**

QC

RER

RPD

TEF

TEQ

TNTC

RL

Glossary	
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

Eurofins Carlsbad

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

Case Narrative

 Client: Ensolum
 Job ID: 890-3347-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Job ID: 890-3347-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3347-1

Receipt

The sample was received on 11/1/2022 12:43 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0° C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: SW03 (890-3347-1).

GC VOA

Method 8021B: The LCS was biased low for benzene, however the LCSD was acceptable. Since the method requires only an LCS,the data was qualified and reported. (LCS 880-38531/1-A)

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-38531 and analytical batch 880-38810 were outside control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SW03 (890-3347-1) and (880-21034-A-1-E MSD). Evidence of matrix interferences is not obvious.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-3350-A-1-E MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-38586 and analytical batch 880-38574 was outside control limits. Sample non-homogeneity is suspected.

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

HPLC/IC

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

2

5

4

0

0

9

. .

12

13

_ _ _ _

Client Sample Results

Client: Ensolum Job ID: 890-3347-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: SW03 Lab Sample ID: 890-3347-1 Date Collected: 11/01/22 08:30

Matrix: Solid

Date Received: 11/01/22 12:43 Sample Depth: 0-3'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *-	0.00199		mg/Kg		11/02/22 15:55	11/08/22 09:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/02/22 15:55	11/08/22 09:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/02/22 15:55	11/08/22 09:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/02/22 15:55	11/08/22 09:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/02/22 15:55	11/08/22 09:38	•
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/02/22 15:55	11/08/22 09:38	,
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130				11/02/22 15:55	11/08/22 09:38	1
1,4-Difluorobenzene (Surr)	99		70 - 130				11/02/22 15:55	11/08/22 09:38	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/08/22 13:40	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	188		50.0		mg/Kg			11/04/22 11:08	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/03/22 08:35	11/04/22 01:36	1
Diesel Range Organics (Over C10-C28)	188		50.0		mg/Kg		11/03/22 08:35	11/04/22 01:36	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/03/22 08:35	11/04/22 01:36	,
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	84		70 - 130				11/03/22 08:35	11/04/22 01:36	1
	83		70 - 130				11/03/22 08:35	11/04/22 01:36	1
o-Terphenyl									
		ography - So	oluble						
o-Terphenyl - Method: MCAWW 300.0 - Anions Analyte	, Ion Chromato	ography - So Qualifier	oluble RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac

Surrogate Summary

Job ID: 890-3347-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-21034-A-1-D MS	Matrix Spike	125	95	
880-21034-A-1-E MSD	Matrix Spike Duplicate	135 S1+	92	
890-3347-1	SW03	133 S1+	99	
LCS 880-38531/1-A	Lab Control Sample	99	86	
LCSD 880-38531/2-A	Lab Control Sample Dup	126	97	
MB 880-38531/5-A	Method Blank	88	98	
MB 880-38855/5-A	Method Blank	84	101	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3347-1	SW03	84	83	
890-3350-A-1-E MS	Matrix Spike	67 S1-	61 S1-	
890-3350-A-1-F MSD	Matrix Spike Duplicate	85	74	
LCS 880-38586/2-A	Lab Control Sample	99	89	
LCSD 880-38586/3-A	Lab Control Sample Dup	105	105	
MB 880-38586/1-A	Method Blank	83	80	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

 Client: Ensolum
 Job ID: 890-3347-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-38531/5-A

Matrix: Solid Analysis Batch: 38810 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38531

MB	MB
Daguile	Ouglifien

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:55	11/08/22 02:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:55	11/08/22 02:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:55	11/08/22 02:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/02/22 15:55	11/08/22 02:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:55	11/08/22 02:13	1
Xylenes, Total	< 0.00400	U	0.00400		mg/Kg		11/02/22 15:55	11/08/22 02:13	1

MB MB

Surrogate	%Recovery Qualifier	Limits	P	repared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88	70 - 130	11/0	2/22 15:55	11/08/22 02:13	1
1,4-Difluorobenzene (Surr)	98	70 - 130	11/0	2/22 15:55	11/08/22 02:13	1

Lab Sample ID: LCS 880-38531/1-A

Matrix: Solid

Analysis Batch: 38810

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38531

	Spike	LCS LCS			%Rec	
Analyte	Added Re	sult Qualifier	Unit	D %Red	Limits	
Benzene	0.100 0.06	515 *-	mg/Kg	65	70 - 130	
Toluene	0.100 0.08	772	mg/Kg	88	3 70 - 130	
Ethylbenzene	0.100 0.09	084	mg/Kg	91	70 - 130	
m-Xylene & p-Xylene	0.200 0.1	595	mg/Kg	80	70 - 130	
o-Xylene	0.100 0.07	957	mg/Kg	80	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

Lab Sample ID: LCSD 880-38531/2-A

Matrix: Solid

Analysis Batch: 38810

Prep Type: Total/NA

Prep Batch: 38531

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08307		mg/Kg		83	70 - 130	24	35
Toluene	0.100	0.1069		mg/Kg		107	70 - 130	20	35
Ethylbenzene	0.100	0.1095		mg/Kg		109	70 - 130	19	35
m-Xylene & p-Xylene	0.200	0.1965		mg/Kg		98	70 - 130	21	35
o-Xylene	0.100	0.09951		mg/Kg		100	70 - 130	22	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	126	70 - 130
1,4-Difluorobenzene (Surr)	97	70 - 130

Lab Sample ID: 880-21034-A-1-D MS

Matrix: Solid

Analysis Batch: 38810

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 38531

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U *- F1	0.0998	0.08068		mg/Kg		81	70 - 130	
Toluene	< 0.00200	U	0.0998	0.09502		mg/Kg		95	70 - 130	

Eurofins Carlsbad

9

3

4

5

7

9

11

16

QC Sample Results

Job ID: 890-3347-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: 880-21034-A-1-D MS

Matrix: Solid

Analysis Batch: 38810

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 38531

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Ethylbenzene <0.00200 U 0.0998 0.09480 95 70 - 130 mg/Kg m-Xylene & p-Xylene <0.00401 0.200 0.1656 mg/Kg 83 70 - 130 0.0998 o-Xylene <0.00200 U 0.08467 85 70 - 130 mg/Kg

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	125	70 - 130
1,4-Difluorobenzene (Surr)	95	70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 38531

Lab Sample ID: 880-21034-A-1-E MSD **Matrix: Solid**

Analysis Batch: 38810

MSD MSD Sample Sample Spike Result Qualifier Added Result Qualifier %Rec RPD Limit Analyte Unit Limits 0.101 Benzene <0.00200 U *- F1 0.06518 F1 mg/Kg 65 70 - 130 21 35 0.08003 Toluene <0.00200 0.101 mg/Kg 79 70 - 130 17 35 Ethylbenzene <0.00200 0.101 0.08173 mg/Kg 81 70 - 130 15 35 0.202 0.1444 72 70 - 130 35 m-Xylene & p-Xylene <0.00401 U mg/Kg 14 0.101 <0.00200 U 0.07673 76 70 - 130 o-Xylene mg/Kg 10

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: MB 880-38855/5-A

Matrix: Solid

Analysis Batch: 38810

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38855

MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/07/22 11:02	11/07/22 14:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/07/22 11:02	11/07/22 14:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/07/22 11:02	11/07/22 14:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/07/22 11:02	11/07/22 14:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/07/22 11:02	11/07/22 14:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/07/22 11:02	11/07/22 14:38	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepa	ared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130	11/07/22	2 11:02	11/07/22 14:38	1
1,4-Difluorobenzene (Surr)	101		70 - 130	11/07/22	2 11:02	11/07/22 14:38	1

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

Lab Sample ID: MB 880-38586/1-A

Matrix: Solid

Analysis Batch: 38574

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 38586

MB MB Analyte Result Qualifier RL MDL Unit Prepared Analyzed <50.0 U 50.0 11/03/22 08:35 11/03/22 22:42 Gasoline Range Organics mg/Kg

(GRO)-C6-C10

Client: Ensolum Job ID: 890-3347-1 Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: MB 880-38586/1-A **Matrix: Solid**

Analysis Batch: 38574 MB MB Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 38586

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		11/03/22 08:35	11/03/22 22:42	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/03/22 08:35	11/03/22 22:42	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130	11/03/22 08:35	11/03/22 22:42	1
o-Terphenyl	80		70 - 130	11/03/22 08:35	11/03/22 22:42	1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 880-38586/2-A **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 38574 Prep Batch: 38586

LCS LCS Spike Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics 1000 887.3 89 70 - 130 mg/Kg (GRO)-C6-C10 1000 Diesel Range Organics (Over 1144 mg/Kg 114 70 - 130C10-C28)

LCS LCS

Surrogate	%Recovery Qualifier	r Limits
1-Chlorooctane	99	70 _ 130
o-Terphenyl	89	70 - 130

Lab Sample ID: LCSD 880-38586/3-A

Matrix: Solid

Analysis Batch: 38574

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 38586

Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier %Rec Limits RPD Limit Unit D Gasoline Range Organics 1000 1084 108 70 - 130 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1300 mg/Kg 130 70 - 130 13 20 C10-C28)

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

Lab Sample ID: 890-3350-A-1-E MS

Matrix: Solid

Analysis Batch: 38574

Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 38586

MS MS Spike %Rec Sample Sample Limits Result Qualifier Added Result Qualifier %Rec Analyte Unit 997 819.8 70 - 130 Gasoline Range Organics 59.2 76 mg/Kg (GRO)-C6-C10 997 747.7 Diesel Range Organics (Over <50.0 U F2 mg/Kg 75 70 - 130

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	67	S1-	70 - 130
o-Terphenyl	61	S1-	70 - 130

Lab Sample ID: 890-3350-A-1-F MSD

Job ID: 890-3347-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

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

Client Sample ID: Matrix Spike Duplicate

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

Prep Type: Total/NA

Prep Batch: 38586

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	59.2		999	958.5		mg/Kg		90	70 - 130	16	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U F2	999	926.8	F2	mg/Kg		93	70 - 130	21	20
040,000)											

C10-C28)

Matrix: Solid

Analysis Batch: 38574

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	74		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38521/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38782

мв мв

Analyte	Result Qualifi		MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 U	5.00	mg/Kg			11/05/22 18:57	1

Lab Sample ID: LCS 880-38521/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38782

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	260.8		mg/Kg		104	90 - 110	

Lab Sample ID: LCSD 880-38521/3-A

Matrix: Solid

Analysis Batch: 38782

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 263.3 105 90 - 110 mg/Kg

Lab Sample ID: 880-21018-A-2-B MS

Matrix: Solid

Analysis Batch: 38782

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	97.7		249	343.7		ma/Ka		99	90 - 110	

Lab Sample ID: 880-21018-A-2-C MSD

Matrix: Solid

Analysis Batch: 38782

Allalysis Datcil. 30702											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	97.7		249	340.4		mg/Kg		97	90 - 110	1	20

QC Association Summary

 Client: Ensolum
 Job ID: 890-3347-1

 Project/Site: EP USA 3
 SDG: 03A1987053

GC VOA

Prep Batch: 38531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3347-1	SW03	Total/NA	Solid	5035	
MB 880-38531/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38531/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38531/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21034-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-21034-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 38810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3347-1	SW03	Total/NA	Solid	8021B	38531
MB 880-38531/5-A	Method Blank	Total/NA	Solid	8021B	38531
MB 880-38855/5-A	Method Blank	Total/NA	Solid	8021B	38855
LCS 880-38531/1-A	Lab Control Sample	Total/NA	Solid	8021B	38531
LCSD 880-38531/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38531
880-21034-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	38531
880-21034-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	38531

Prep Batch: 38855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38855/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 39008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3347-1	SW03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 38574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3347-1	SW03	Total/NA	Solid	8015B NM	38586
MB 880-38586/1-A	Method Blank	Total/NA	Solid	8015B NM	38586
LCS 880-38586/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38586
LCSD 880-38586/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38586
890-3350-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	38586
890-3350-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38586

Prep Batch: 38586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3347-1	SW03	Total/NA	Solid	8015NM Prep	
MB 880-38586/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38586/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38586/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3350-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3350-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 38723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3347-1	SW03	Total/NA	Solid	8015 NM	

Eurofins Carlsbad

3

6

8

10

12

13

QC Association Summary

 Client: Ensolum
 Job ID: 890-3347-1

 Project/Site: EP USA 3
 SDG: 03A1987053

HPLC/IC

Leach Batch: 38521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3347-1	SW03	Soluble	Solid	DI Leach	
MB 880-38521/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38521/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38521/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-21018-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-21018-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 38782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3347-1	SW03	Soluble	Solid	300.0	38521
MB 880-38521/1-A	Method Blank	Soluble	Solid	300.0	38521
LCS 880-38521/2-A	Lab Control Sample	Soluble	Solid	300.0	38521
LCSD 880-38521/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38521
880-21018-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	38521
880-21018-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38521

5

0

9

44

12

13

Lab Chronicle

 Client: Ensolum
 Job ID: 890-3347-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Client Sample ID: SW03 Lab Sample ID: 890-3347-1

Matrix: Solid

Date Collected: 11/01/22 08:30 Date Received: 11/01/22 12:43

	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	38531	11/02/22 15:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38810	11/08/22 09:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39008	11/08/22 13:40	AJ	EET MID
Total/NA	Analysis	8015 NM		1			38723	11/04/22 11:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38586	11/03/22 08:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38574	11/04/22 01:36	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	38521	11/02/22 14:40	СН	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	38782	11/07/22 17:22	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

3

4

5

8

9

11

13

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-3347-1
Project/Site: EP USA 3 SDG: 03A1987053

Laboratory: Eurofins Midland

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

Authority	Pr	Program		Expiration Date	
Texas	NE	ELAP	T104704400-22-24	06-30-23	
The following analytes	are included in this report by	it the leberatory is not contiffi	iad butba gaugeming authority. This list ma		
the agency does not of	' '	it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for v	
,	' '	Matrix	Analyte	ay include analytes for v	
the agency does not of	fer certification.	•	, , ,	ay include analytes for v	

3

4

5

7

9

4 4

Method Summary

 Client: Ensolum
 Job ID: 890-3347-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Method **Method Description** Protocol Laboratory 8021B Volatile Organic Compounds (GC) SW846 EET MID **Total BTEX Calculation** Total BTEX 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 SW846 **EET MID** Closed System Purge and Trap 8015NM Prep Microextraction SW846 EET MID

Protocol References:

DI Leach

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

Deionized Water Leaching Procedure

Laboratory References:

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

Eurofins Carlsbad

2

4

5

7

EET MID

ASTM

g

10

12

16

М

Sample Summary

Client: Ensolum

Project/Site: EP USA 3

Job ID: 890-3347-1

SDG: 03A1987053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3347-1	SW03	Solid	11/01/22 08:30	11/01/22 12:43	0-3'

eurofins

Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Houston, TX (281) 240-4200. Dallas, TX (214) 902-0300

	Xenco	Xenco		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	Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	WORK Craer No.	er No.	
Project Manager	Ben Belill		Bill to: (if different)	nt) Jim Raley		Work Order	Comments	
Company Name:	Ensolum		Company Name:			Program: UST/PST 🔲 PRP 🗎 Brownfields 📗 RRC 🗌	Brownfields RRC Superfund	<u> </u>
Address:	3122 National Parks HWY	YWH	Address:	5315 Buena Vista Dr	sta Dr.	State of Project:]
City, State ZIP:	Carlsbad, NM 88220		City, State ZIP:	Carlsbad, NM 88220	8220	Reporting: Level II Level III PST/UST TRRP	PST/UST TRRP Level IV	
Phone:	989-854-0852		Email: BBelill@Ensolum.com,	olum.com, jim.raley@dvn.com	vn.com	Deliverables: EDD	ADaPT Other:	
Project Name:	EP USA 3	3	Turn Around		ANALYSIS REQUEST	QUEST	Preservative Codes	
Project Number:	03A1987053	53 🔽 Routine	utine 🗌 Rush	Pres. Code			None: NO DI Water: H ₂ O	120
Project Location:	Eddy County, NM	NM Due Date:	Date: 5 Day TAT				Cool: Cool MeOH: Me	
Sampler's Name:	Gilbert Moreno		TAT starts the day received by					
CC #:	1061155101		the lab, if received by 4:30pm	ers			H ₂ SO ₄ : H ₂ NaOH: Na	
SAMPLE RECEIPT	PT Temp Blank:	Yes No Wel	Wet Ice: Yes No	nete			H ₃ PO ₄ : HP	
Samples Received Intact:		Thermometer ID:	TAM-OD				NaHSO ₄ : NABIS	9
Cooler Custody Seals:	S: Yes No OWA	Correction Factor:			890-3347 C	347 Chain of Custory	Na ₂ S ₂ O ₃ . NaSO ₃	of 1
Sample Custody Seals:	als: Yes NO NA	_	10	ES (NOUT Assorbis Asid: SABO	
Sample Identification	ntification Matrix	Date Sampled	Depth	CHLORIE TPH (801	BTEX (80		Sample Comments	Page
SW03	33 S	11.1.22 8:	8:30 0-3' Comp	× ×	×			_
							Incident Numbers	
		2,5	1				NAB1622531873	
		===						
	1							
	\							
Total 200.7 / 6010 Circle Method(s) and I	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	8RC	13PPM Texas P / SPLP 6010:	s 11 Al Sb As Ba Be I 8RCRA Sb As Ba Be	B Cd Ca Cr Co Cu Fe Pb s Cd Cr Co Cu Pb Mn Mo	Mg Mn Mo Ni K Se A Ni Se Ag TI U	Ag SiO ₂ Na Sr Ti Sn U V Zn Hg:1631/245.1/7470/7471	
Notice: Signature of this of Service. Eurofins Xeno	document and relinquishment of the control of the c	nt of samples constitutes cost of samples and shall be applied to each projec	a valid purchase order from the control of the cont	om client company to Eurofi blity for any losses or exper ch sample submitted to Euro	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 surface. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	tractors. It assigns standard terms and conditions losses are due to circumstances beyond the control se terms will be enforced unless previously negotiat	itions control egotiated.	
Relinquished by: (Signature)	/: (Signature)	Received by: (Signature)	(Signature)	Date/Time	Relinquished by: (Signature)	ture) Received by: (Signature)	Signature) Date/Time	
1 1200	3		4	11/22 (24/22)	1 22			

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3347-1 SDG Number: 03A1987053

Login Number: 3347 List Source: Eurofins Carlsbad

List Number: 1 Creator: Stutzman, Amanda

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

1

2

3

5

7

9

13

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3347-1 SDG Number: 03A1987053

Login Number: 3347 **List Source: Eurofins Midland** List Number: 2

List Creation: 11/02/22 11:49 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	

Released to Imaging: 5/17/2023 8:58:09 AM

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team Ensolum 705 W. Wadley Suite 210 Midland Texas 79701

Generated 11/16/2022 2:50:59 PM Revision 1

JOB DESCRIPTION

EP USA3 SDG NUMBER 03A1987053

JOB NUMBER

890-3348-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM88220



Client: Ensolum
Project/Site: EP USA3

Laboratory Job ID: 890-3348-1
SDG: 03A1987053

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	7
QC Sample Results	8
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receipt Checklists	
Δnnendiy	21

3

4

6

8

10

13

14

Definitions/Glossary

Client: Ensolum Job ID: 890-3348-1 Project/Site: EP USA3 SDG: 03A1987053

Qualifiers

GC VOA Qualifier

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

F2 MS/MSD RPD exceeds control limits

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

GC Semi VOA

Qualifier **Qualifier Description**

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**

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

Released to Imaging: 5/17/2023 8:58:09 AM

Case Narrative

 Client: Ensolum
 Job ID: 890-3348-1

 Project/Site: EP USA3
 SDG: 03A1987053

Job ID: 890-3348-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3348-1

REVISION

The report being provided is a revision of the original report sent on 11/8/2022. The report (revision 1) is being revised due to Per client email, client requesting TPH re run.

Report revision history

Receipt

The samples were received on 11/1/2022 12:43 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS04 (890-3348-1) and FS05 (890-3348-2).

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-20981-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-38465 and analytical batch 880-38581 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA

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

HPLC/IC

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

5

6

Q

9

11

14

Client Sample Results

Client: Ensolum Job ID: 890-3348-1 Project/Site: EP USA3 SDG: 03A1987053

Client Sample ID: FS04 Lab Sample ID: 890-3348-1

Matrix: Solid

Date Collected: 11/01/22 09:00 Date Received: 11/01/22 12:43 Sample Donth: 3'

Sample Depth. 3	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/02/22 15:00	11/03/22 16:29	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/02/22 15:00	11/03/22 16:29	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/02/22 15:00	11/03/22 16:29	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/02/22 15:00	11/03/22 16:29	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/02/22 15:00	11/03/22 16:29	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/02/22 15:00	11/03/22 16:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130				11/02/22 15:00	11/03/22 16:29	1
1,4-Difluorobenzene (Surr)	81		70 - 130				11/02/22 15:00	11/03/22 16:29	1

Method: IAL SOP Total BTEX	- Iotal BIE	X Calculat	ion						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/04/22 16:02	1
<u> </u>									

Method: SW846 8015 NM - Die	esel Range C)rganics (Di	RO) (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	90.8		50.0		mg/Kg			11/04/22 11:08	1

Method: SW846 8015B NM - L	Diesel Range	e Organics	6 (DRO) (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/08/22 13:32	11/09/22 04:52	1
Diesel Range Organics (Over C10-C28)	90.8		50.0		mg/Kg		11/08/22 13:32	11/09/22 04:52	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/08/22 13:32	11/09/22 04:52	1
Surrogato	%Pocovory	Ouglifion	l imite				Propared	Analyzod	Dil Eac

Ourroguic	with the second of the second	Lilling	Trepured	Analyzea	Dir r uc
1-Chlorooctane	99	70 - 130	11/08/22 13:32	11/09/22 04:52	1
o-Terphenyl	108	70 - 130	11/08/22 13:32	11/09/22 04:52	1
Г., .,					

method: moAttit oodio - Am	ono, ion omomutogrupni	y - Colubic					
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	216	25.1	mg/Kg			11/07/22 17:29	5

Client Sample ID: FS05 Lab Sample ID: 890-3348-2 Date Collected: 11/01/22 09:10 **Matrix: Solid**

Date Received: 11/01/22 12:43

Sample Depth: 3'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 16:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 16:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 16:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/02/22 15:00	11/03/22 16:50	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 16:50	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/02/22 15:00	11/03/22 16:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130				11/02/22 15:00	11/03/22 16:50	1

Client Sample Results

 Client: Ensolum
 Job ID: 890-3348-1

 Project/Site: EP USA3
 SDG: 03A1987053

Client Sample ID: FS05 Lab Sample ID: 890-3348-2

Date Collected: 11/01/22 09:10 Matrix: Solid
Date Received: 11/01/22 12:43

Method: SW846 8021B - Volat	tile Organic	Compound	ds (GC) (Cont	inued)					
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	76		70 - 130				11/02/22 15:00	11/03/22 16:50	1
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/04/22 16:02	
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
Method: SW846 8015B NM - [_	_			mg/Kg			11/04/22 11:08	
Method: SW846 8015B NM - D Analyte	Diesel Range Result	Qualifier	(DRO) (GC)	MDL	Unit	 	Prepared	Analyzed	Dil Fa
Method: SW846 8015B NM - D Analyte Gasoline Range Organics	Diesel Range	Qualifier	(DRO) (GC)	MDL		<u>D</u>	Prepared 11/08/22 13:32		Dil Fa
Method: SW846 8015B NM - DANAINTE Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Diesel Range Result	Qualifier	(DRO) (GC)	MDL	Unit	<u>D</u>		Analyzed	
Method: SW846 8015B NM - DANAINTENT CONTROL OF CONTROL	Diesel Range Result <50.0	Qualifier U	(DRO) (GC) RL 50.0	MDL	Unit mg/Kg	D	11/08/22 13:32	Analyzed 11/09/22 05:13 11/09/22 05:13	
Method: SW846 8015B NM - DANAINTE Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Diesel Range Result <50.0	Qualifier U	(DRO) (GC) RL 50.0	MDL	Unit mg/Kg mg/Kg	<u>D</u>	11/08/22 13:32 11/08/22 13:32	Analyzed 11/09/22 05:13 11/09/22 05:13	
Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <50.0 <50.0	Qualifier U	(DRO) (GC) RL 50.0 50.0	MDL	Unit mg/Kg mg/Kg	<u>D</u>	11/08/22 13:32 11/08/22 13:32 11/08/22 13:32	Analyzed 11/09/22 05:13 11/09/22 05:13 11/09/22 05:13	Dil Fa

Method: MCAWW 300.0 - Anior	ns, Ion Chr	omatograp	hy - Soluble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	241		24.8		mg/Kg			11/07/22 17:36	5

Surrogate Summary

Client: Ensolum Job ID: 890-3348-1 Project/Site: EP USA3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Perc	ent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-20981-A-1-B MS	Matrix Spike	91	93	
880-20981-A-1-C MSD	Matrix Spike Duplicate	46 S1-	71	
890-3348-1	FS04	107	81	
890-3348-2	FS05	72	76	
LCS 880-38465/1-A	Lab Control Sample	95	99	
LCSD 880-38465/2-A	Lab Control Sample Dup	98	94	
MB 880-38465/5-A	Method Blank	98	91	

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

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

Matrix: Solid Prep Type: Total/NA

			Percent Su	rrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3348-1	FS04	99	108	
890-3348-2	FS05	96	105	
890-3393-A-1-C MS	Matrix Spike	88	85	
890-3393-A-1-D MSD	Matrix Spike Duplicate	95	90	
LCS 880-39001/2-A	Lab Control Sample	109	119	
LCSD 880-39001/3-A	Lab Control Sample Dup	100	108	
MB 880-39001/1-A	Method Blank	99	114	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum Job ID: 890-3348-1 Project/Site: EP USA3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-38465/5-A

Matrix: Solid

Analysis Batch: 38581

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38465

	MB	MR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/02/22 15:00	11/03/22 10:56	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98	70 - 130	11/02/22 15:00	11/03/22 10:56	1
1,4-Difluorobenzene (Surr)	91	70 - 130	11/02/22 15:00	11/03/22 10:56	1

Lab Sample ID: LCS 880-38465/1-A

Matrix: Solid

Analysis Batch: 38581

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38465 %Rec Limits 70 - 130

Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Benzene 0.100 0.07921 mg/Kg 79 Toluene 0.100 mg/Kg 81 70 - 130 0.08140 Ethylbenzene 0.100 0.08324 mg/Kg 83 70 - 130 0.200 82 m-Xylene & p-Xylene 0.1632 mg/Kg 70 - 130 o-Xylene 0.100 0.09295 mg/Kg 93 70 - 130

Spike

Added

0.100

0.100

0.100

0.200

0.100

LCSD LCSD

0.08528

0.08804

0.09032

0.1781

0.1002

Result Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: LCSD 880-38465/2-A

Matrix: Solid

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 38581

Client Sample ID: Lab Control Sample Dup

89

100

Prep Type: Total/NA Prep Batch: 38465

%Rec **RPD** %Rec Limits **RPD** Limit 85 70 - 130 35 88 70 - 130 8 35 90 70 - 130 8 35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1 4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-20981-A-1-B MS

Matrix: Solid

Analysis Batch: 38581

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

70 - 130

70 - 130

Prep Batch: 38465

-	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00202	U F1 F2	0.0990	0.07448		mg/Kg		74	70 - 130	
Toluene	<0.00202	U F1	0.0990	0.07129		mg/Kg		72	70 - 130	

Eurofins Carlsbad

35

QC Sample Results

Client: Ensolum Job ID: 890-3348-1 SDG: 03A1987053 Project/Site: EP USA3

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

Client Sample ID: Matrix Spike Lab Sample ID: 880-20981-A-1-B MS **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 38581 Prep Batch: 38465 Spike Sample Sample

	Sample	Sample	Spike	IVIO	IVIO				/01 \C C	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00202	U F1 F2	0.0990	0.06359	F1	mg/Kg		64	70 - 130	
m-Xylene & p-Xylene	0.00417	F1 F2	0.198	0.1265	F1	mg/Kg		62	70 - 130	
o-Xylene	<0.00202	U F1 F2	0.0990	0.06683	F1	mg/Kg		67	70 - 130	

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 70 - 130 91 1,4-Difluorobenzene (Surr) 70 - 130 93

Lab Sample ID: 880-20981-A-1-C MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid

Prep Batch: 38465 **Analysis Batch: 38581**

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00202	U F1 F2	0.0994	0.03522	F1 F2	mg/Kg		34	70 - 130	72	35
Toluene	<0.00202	U F1	0.0994	0.05260	F1	mg/Kg		53	70 - 130	30	35
Ethylbenzene	<0.00202	U F1 F2	0.0994	0.03748	F1 F2	mg/Kg		38	70 - 130	52	35
m-Xylene & p-Xylene	0.00417	F1 F2	0.199	0.06178	F1 F2	mg/Kg		29	70 - 130	69	35
o-Xylene	<0.00202	U F1 F2	0.0994	0.03257	F1 F2	mg/Kg		33	70 - 130	69	35

MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) S1-70 - 130 46 1,4-Difluorobenzene (Surr) 71 70 - 130

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

Lab Sample ID: MB 880-39001/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 38944** Prep Batch: 39001

MB MB Analyte Result Qualifier RL **MDL** Unit **Prepared** Analyzed Dil Fac <50.0 U 50.0 11/08/22 13:32 11/08/22 20:25 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 50.0 11/08/22 13:32 11/08/22 20:25 mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 mg/Kg 11/08/22 13:32 11/08/22 20:25

MB MB Surrogate %Recovery Qualifier Limits Prepared Dil Fac Analyzed 11/08/22 13:32 11/08/22 20:25 1-Chlorooctane 70 - 130 99

70 - 130 11/08/22 13:32 11/08/22 20:25 o-Terphenyl 114

Lab Sample ID: LCS 880-39001/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 38944 Prep Batch: 39001 LCS LCS Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits 1000 972.6 97 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1026 mg/Kg 103 70 - 130

C10-C28)

Eurofins Carlsbad

Prep Type: Total/NA

Client: Ensolum Job ID: 890-3348-1 Project/Site: EP USA3 SDG: 03A1987053

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

Lab Sample ID: LCS 880-39001/2-A

Matrix: Solid

Analysis Batch: 38944

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39001

LCS LCS

%Recovery Qualifier Limits Surrogate 1-Chlorooctane 109 70 - 130 o-Terphenyl 119 70 - 130

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 880-39001/3-A

Analysis Batch: 38944

Matrix: Solid Prep Type: Total/NA

Prep Batch: 39001

LCSD LCSD %Rec **RPD** Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 826.3 mg/Kg 83 70 - 130 16 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 911.4 mg/Kg 91 70 - 130 12 20 C10-C28)

LCSD LCSD

Lab Sample ID: 890-3393-A-1-C MS

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

Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 38944

Prep Type: Total/NA Prep Batch: 39001

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	946.6		mg/Kg	_	92	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	997	808.4		mg/Kg		81	70 - 130	

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 88 o-Terphenyl 85 70 - 130

Lab Sample ID: 890-3393-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 38944

Prep Type: Total/NA

Prep Batch: 39001

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1139		mg/Kg		111	70 - 130	18	20	
Diesel Range Organics (Over	<50.0	U	999	855.3		mg/Kg		86	70 - 130	6	20	

C10-C28)

MSD	MSD	
%Recovery	Qualifier	Limits
95		70 - 130

Surrogate 1-Chlorooctane 70 - 130 o-Terphenyl 90

QC Sample Results

Spike

Added

250

Spike

Added

Spike

Added

Spike

Added

249

249

250

Client: Ensolum Job ID: 890-3348-1 Project/Site: EP USA3 SDG: 03A1987053

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38521/1-A

Matrix: Solid

Analysis Batch: 38782

MB MB

Analyte Result Qualifier RL **MDL** Unit 5.00

Sample Sample

Result Qualifier

Chloride <5.00 U

Lab Sample ID: LCS 880-38521/2-A **Matrix: Solid**

Analysis Batch: 38782

Analyte

Chloride

Lab Sample ID: LCSD 880-38521/3-A **Matrix: Solid**

Analysis Batch: 38782

Analyte

Lab Sample ID: 880-21018-A-2-B MS

Matrix: Solid

Chloride

Analysis Batch: 38782

Analyte

Chloride 97.7

Lab Sample ID: 880-21018-A-2-C MSD **Matrix: Solid**

Analysis Batch: 38782

Sample Sample Analyte

Result Qualifier Chloride 97.7

Client Sample ID: Method Blank

Prep Type: Soluble

Analyzed Dil Fac

Client Sample ID: Lab Control Sample

%Rec

Prep Type: Soluble

11/05/22 18:57

Result Qualifier Unit D %Rec Limits 90 - 110 mg/Kg 104

Prepared

D

mg/Kg

LCS LCS

LCSD LCSD

MS MS

MSD MSD

Result Qualifier

Result Qualifier

Result Qualifier

Unit

Unit

mg/Kg

mg/Kg

260.8

263.3

343.7

340.4

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

%Rec RPD Limits **RPD** Limit %Rec 105 90 - 110

Client Sample ID: Matrix Spike

%Rec

Limits

90 - 110

Prep Type: Soluble

Client Sample ID: Matrix Spike Duplicate

%Rec

Prep Type: Soluble

RPD %Rec

Unit Limits %Rec **RPD** Limit 97 20 mg/Kg 90 - 110

QC Association Summary

Client: Ensolum Job ID: 890-3348-1 Project/Site: EP USA3 SDG: 03A1987053

GC VOA

Prep Batch: 38465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3348-1	FS04	Total/NA	Solid	5035	
890-3348-2	FS05	Total/NA	Solid	5035	
MB 880-38465/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38465/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38465/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20981-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-20981-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 38581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3348-1	FS04	Total/NA	Solid	8021B	38465
890-3348-2	FS05	Total/NA	Solid	8021B	38465
MB 880-38465/5-A	Method Blank	Total/NA	Solid	8021B	38465
LCS 880-38465/1-A	Lab Control Sample	Total/NA	Solid	8021B	38465
LCSD 880-38465/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38465
880-20981-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	38465
880-20981-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	38465

Analysis Batch: 38750

Lab Sample ID	Client Sample ID	le ID Prep Type			Prep Batch
890-3348-1	FS04	Total/NA	Solid	Total BTEX	
890-3348-2	FS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 38724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3348-1	FS04	Total/NA	Solid	8015 NM	
890-3348-2	FS05	Total/NA	Solid	8015 NM	

Analysis Batch: 38944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3348-1	FS04	Total/NA	Solid	8015B NM	39001
890-3348-2	FS05	Total/NA	Solid	8015B NM	39001
MB 880-39001/1-A	Method Blank	Total/NA	Solid	8015B NM	39001
LCS 880-39001/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	39001
LCSD 880-39001/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	39001
890-3393-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	39001
890-3393-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	39001

Prep Batch: 39001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3348-1	FS04	Total/NA	Solid	8015NM Prep	
890-3348-2	FS05	Total/NA	Solid	8015NM Prep	
MB 880-39001/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-39001/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-39001/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3393-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3393-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum Job ID: 890-3348-1 Project/Site: EP USA3 SDG: 03A1987053

HPLC/IC

Leach Batch: 38521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3348-1	FS04	Soluble	Solid	DI Leach	
890-3348-2	FS05	Soluble	Solid	DI Leach	
MB 880-38521/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38521/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38521/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-21018-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-21018-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 38782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3348-1	FS04	Soluble	Solid	300.0	38521
890-3348-2	FS05	Soluble	Solid	300.0	38521
MB 880-38521/1-A	Method Blank	Soluble	Solid	300.0	38521
LCS 880-38521/2-A	Lab Control Sample	Soluble	Solid	300.0	38521
LCSD 880-38521/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38521
880-21018-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	38521
880-21018-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38521

Job ID: 890-3348-1 SDG: 03A1987053

Client Sample ID: FS04

Date Received: 11/01/22 12:43

Client: Ensolum

Project/Site: EP USA3

Lab Sample ID: 890-3348-1 Date Collected: 11/01/22 09:00

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			4.97 g	5 mL	38465	11/02/22 15:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38581	11/03/22 16:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38750	11/04/22 16:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			38724	11/04/22 11:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	39001	11/08/22 13:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38944	11/09/22 04:52	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	38521	11/02/22 14:40	СН	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	38782	11/07/22 17:29	CH	EET MID

Client Sample ID: FS05 Lab Sample ID: 890-3348-2 Date Collected: 11/01/22 09:10 **Matrix: Solid**

Date Received: 11/01/22 12:43

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	38465	11/02/22 15:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38581	11/03/22 16:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38750	11/04/22 16:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			38724	11/04/22 11:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	39001	11/08/22 13:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38944	11/09/22 05:13	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	38521	11/02/22 14:40	CH	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	38782	11/07/22 17:36	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 Job ID: 890-3348-1 Project/Site: EP USA3 SDG: 03A1987053

Laboratory: Eurofins Midland

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

Authority	Pro	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
ras The following analytes are the agency does not offer Analysis Method	s are included in this rend	ort but the laboratory is r	not certified by the governing authority	This list may include analytes for y
the agency does not	•	ore, but the laboratory is i	iot certified by the governing authority.	This list may include analytes for v
,	•	Matrix	Analyte	This list may include analytes for v
the agency does not	offer certification.	•		This list may include analytes for v

3

4

O

9

11

14

14

Method Description

Method Summary

Client: Ensolum Project/Site: EP USA3

Method

Job ID: 890-3348-1 SDG: 03A1987053

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

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

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: EP USA3

Job ID: 890-3348-1

SDG: 03A1987053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3348-1	FS04	Solid	11/01/22 09:00	11/01/22 12:43	3'
890-3348-2	FS05	Solid	11/01/22 09:10	11/01/22 12:43	3'

hed by: (Signature)

The same

Repu

MERCI

Revised Date: 08/25/2020 Rev. 2020 2

Chain of Custody

City, State ZIP: Project Manager: Company Name: eurofins Carlsbad, NM 88220 Ensolum 989-854-0852 3122 National Parks HWY Ben Belill **Environment Testing** Xenco Email: BBelill@Ensolum.com, jim.raley@dvn.com City, State ZIP: Company Name: Bill to: (if different) 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 Houston, TX (281) 240-4200. Dallas, TX (214) 902-0300 WPX Carlsbad, NM 88220 5315 Buena Vista Dr Jim Raley State of Project: Deliverables: EDD Reporting: Level II | Level III | PST/UST | TRRP | Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐ www.xenco.com **Work Order Comments** ADaPT 🗆

Turn Around	olice: Signature of this document and rel service. Eurofins Xenco will be liable or Eurofins Xenco. A minimum charge of the control of the co	Total 200.7 / 6010 200.8 / 6020: ircle Method(s) and Metal(s) to be analyzed	\							FS05	FS04	Sample Identification	otal Containers:	ample Custody Seals: Ye	ooler Custody Seals: Yes	amples Received Intact:	AMPLE RECEIPT	C#:	ampler's Name:	roject Location:	roject Number:	roject Name:	
Preservative None: NO Cool: Cool HcL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH NaOH+Ascorbic A Sample Cc Sample Cc NAB1622 NAB1622 NAB1622	nd relinquishments only for the ge of \$85.00 will	200.8 / 6020: tal(s) to be ana	 1	1	>					S	S	Mat			No	Yes) No	Temp Blank:	10611551	Gilbert Mo	ddy Count	03A19870	EP USA	-
Preservative None: NO Cool: Cool HcL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH NaOH+Ascorbic A Sample Cc Sample Cc NAB1622 NAB1622 NAB1622 NAB1622 NAB1622	ent of samples c cost of samples be applied to ea	alyzed		V	9					11.1.22	11.1.22		Corrected	A Temperat	A Correction	Thermom	Yes	01	reno	Y, NM	053	ω	
Preservative None: NO Cool: Cool HcL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH NaOH+Ascorbic A Sample Cc Sample Cc NAB1622 NAB1622 NAB1622 NAB1622 NAB1622	onstitutes a vali	8RCRA 13			1	11.1.2				9:10	9:00		Temperature	ure Reading:	Factor:	eter ID:		the lab, if re	TAT starts t	Due Date:	☑ Routine	Tur	
Preservative None: NO Cool: Cool HcL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH NaOH+Ascorbic A Sample Cc Sample Cc NAB1622 NAB1622 NAB1622 D.	ssume any respo	SPPM Texa				1								N	,0,	ナファウ		ceived by 4:30	he day received	5 Day TA	Rush	n Around	
Preservative None: NO Cool: Cool HcL: HC H ₂ S0 ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NASO ₃ Zn Acetate+NaOH NaOH+Ascorbic A Sample Cc Sample Cc NAB1622 NAB1622 NAB1622 D. LITTER NO U NAB1622	r from clie	s 11 A 8RCR/		\parallel	_	1			-			ab/ # c	~		P	日 arar			by	7	Coc		
Preservative None: NO Cool: Cool HcL: HC H ₂ S0 ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NASO ₃ Zn Acetate+NaOH NaOH+Ascorbic A Sample Cc Sample Cc NAB1622 NAB1622 NAB1622 D. LITTER NO U NAB1622	nt comport or any loon npie sub-	A Sb		\parallel						-			RIDE	S (E	-	-	_				0 5		
Preservative None: NO Cool: Cool HcL: HC H ₂ S0 ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NASO ₃ Zn Acetate+NaOH NaOH+Ascorbic A Sample Cc Sample Cc NAB1622 NAB1622 NAB1622 D. LITTER NO U NAB1622	any to Eusses or e	As Ba					1			×	×	TPH (8	015)						-				
Preservative None: NO Cool: Cool HcL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH NaOH+Ascorbic A Sample Cc Sample Cc NAB1622 NAB1622 NAB1622 D.	xpenses Eurofins	Be B					1			×	×	втех (802	1									
Preservative None: NO Cool: Cool HcL: HC H ₂ S0 ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NASO ₃ Zn Acetate+NaOH NaOH+Ascorbic A Sample Cc Sample Cc NAB1622 NAB1622 NAB1622 D. LITTER NO U NAB1622	nco, its affiliates and subcontractors. It assigns incurred by the client if such losses are due to o xenco, but not analyzed. These terms will be en Relinquished by: (Signature)	Cd Ca Cr Co Cu Fe Pb Mg Mn 3d Cr Co Cu Pb Mn Mo Ni Se <i>F</i>																				ANALYSIS REQUEST	
	ed.	n Mo Ni K Se Ag SiO ₂ Na Sr TI Sn U V Z Ag TI U Hg: 1631/245.1/7470/747						NAB162253	Incident Nun			Sample Com	NaOH+Ascorbic Acid	The state of the s		NaHSO4: NABIS	H ₃ PO ₄ : HP			<u>∪</u>		Preservative	

SAMPLE RECEIPT

Sampler's Name:

Project Number:

Phone:

\ddress:

Work Order No:

Page

잋

Level IV

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3348-1 SDG Number: 03A1987053

Login Number: 3348 **List Source: Eurofins Carlsbad**

List Number: 1

Creator: Stutzman, Amanda

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3348-1

SDG Number: 03A1987053

List Source: Eurofins Midland
List Number: 2
List Creation: 11/02/22 11:49 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	
s 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	

102 UJ 202

Eurofins Carlsbad

<6mm (1/4").

Eurofins Carlsbad

Job Notes

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

Authorization

Generated 11/16/2022 2:50:59 PM Revision 1

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

Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3350-1

Laboratory Sample Delivery Group: 03A1987053

Client Project/Site: EP USA 3

For:

🛟 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Devon Team

JURAMER

Authorized for release by: 11/4/2022 10:38:01 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

.....LINKS

Review your project results through

Have a Question?



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 5/17/2023 8:58:09 AM

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

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

Client: Ensolum
Project/Site: EP USA 3
Laboratory Job ID: 890-3350-1
SDG: 03A1987053

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	8
QC Sample Results	9
QC Association Summary	16
Lab Chronicle	19
Certification Summary	20
Method Summary	21
Sample Summary	22
Chain of Custody	23
Receint Checklists	24

2

3

4

6

8

10

12

13

Definitions/Glossary

 Client: Ensolum
 Job ID: 890-3350-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Qualifiers

GC VOA Qualifier

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

Qualifier Description

GC Semi VOA

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

Glossary

Cioccai	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)

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 Limi

NC	Not Calculate

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 Contro

KEK	Relative Error Ratio	(Radiocnemistry)

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: EP USA 3

Job ID: 890-3350-1 SDG: 03A1987053

Job ID: 890-3350-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3350-1

Receipt

The samples were received on 11/1/2022 12:43 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS06 (890-3350-1), FS07 (890-3350-2) and FS08 (890-3350-3).

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-20981-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-38465 and analytical batch 880-38581 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-38420 and analytical batch 880-38442 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 sample was outside control limits: (890-3350-A-1-E MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-38586 and analytical batch 880-38574 was outside control limits. Sample non-homogeneity is suspected.

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

HPLC/IC

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

3

4

5

7

a

10

12

13

Matrix: Solid

Lab Sample ID: 890-3350-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-3350-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Client Sample ID: FS06

Date Collected: 11/01/22 09:20 Date Received: 11/01/22 12:43

Sample Depth: 3'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:07	11/02/22 19:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:07	11/02/22 19:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:07	11/02/22 19:31	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/02/22 15:07	11/02/22 19:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:07	11/02/22 19:31	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/02/22 15:07	11/02/22 19:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				11/02/22 15:07	11/02/22 19:31	1
1,4-Difluorobenzene (Surr)	96		70 - 130				11/02/22 15:07	11/02/22 19:31	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			11/03/22 16:02	1
•									
Method: SW846 8015 NM - Diese Analyte		ics (DRO) (0 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			•	MDL	Unit mg/Kg	D	Prepared	Analyzed 11/04/22 11:08	
Analyte	Result 59.2	Qualifier	RL 50.0	MDL		<u>D</u>	Prepared		
Analyte Total TPH	Result 59.2 sel Range Orga	Qualifier	RL 50.0	MDL	mg/Kg	<u>D</u>	Prepared Prepared		1
Analyte Total TPH Method: SW846 8015B NM - Dies	Result 59.2 sel Range Orga	Qualifier nics (DRO)	RL 50.0		mg/Kg			11/04/22 11:08	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result 59.2 sel Range Orga	Qualifier nics (DRO) Qualifier	RL 50.0		mg/Kg		Prepared	11/04/22 11:08 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 59.2 sel Range Orga Result 59.2	Qualifier nics (DRO) Qualifier U F2	RL 50.0 (GC) RL 50.0		mg/Kg Unit mg/Kg		Prepared 11/03/22 08:35	11/04/22 11:08 Analyzed 11/03/22 23:47	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result	Qualifier nics (DRO) Qualifier U F2	RL 50.0 (GC) RL 50.0 50.0		mg/Kg Unit mg/Kg mg/Kg		Prepared 11/03/22 08:35 11/03/22 08:35	11/04/22 11:08 Analyzed 11/03/22 23:47 11/03/22 23:47	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result 59.2 sel Range Orga Result 59.2 <50.0 <50.0	Qualifier nics (DRO) Qualifier U F2	RL 50.0 (GC) RL 50.0 50.0 50.0		mg/Kg Unit mg/Kg mg/Kg		Prepared 11/03/22 08:35 11/03/22 08:35 11/03/22 08:35	Analyzed 11/03/22 23:47 11/03/22 23:47 11/03/22 23:47	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result 59.2	Qualifier nics (DRO) Qualifier U F2	RL 50.0		mg/Kg Unit mg/Kg mg/Kg		Prepared 11/03/22 08:35 11/03/22 08:35 11/03/22 08:35 Prepared	Analyzed 11/03/22 23:47 11/03/22 23:47 11/03/22 23:47 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier nics (DRO) Qualifier U F2 U Qualifier	RL 50.0 (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130		mg/Kg Unit mg/Kg mg/Kg		Prepared 11/03/22 08:35 11/03/22 08:35 11/03/22 08:35 Prepared 11/03/22 08:35	Analyzed 11/03/22 23:47 11/03/22 23:47 11/03/22 23:47 Analyzed 11/03/22 23:47	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies 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 nics (DRO) Qualifier U F2 U Qualifier	RL 50.0 (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	MDL	mg/Kg Unit mg/Kg mg/Kg		Prepared 11/03/22 08:35 11/03/22 08:35 11/03/22 08:35 Prepared 11/03/22 08:35	Analyzed 11/03/22 23:47 11/03/22 23:47 11/03/22 23:47 Analyzed 11/03/22 23:47	Dil Fac 1 Dil Fac 1 Dil Fac 1 Dil Fac

Client Sample ID: FS07 Lab Sample ID: 890-3350-2

Date Collected: 11/01/22 09:30 Date Received: 11/01/22 12:43

Date Received. 11/01/22 12

Sample Depth: 3'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/01/22 17:00	11/03/22 00:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/01/22 17:00	11/03/22 00:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/01/22 17:00	11/03/22 00:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/01/22 17:00	11/03/22 00:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/01/22 17:00	11/03/22 00:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/01/22 17:00	11/03/22 00:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130				11/01/22 17:00	11/03/22 00:57	1

Eurofins Carlsbad

2

3

1

5

-

10

4.6

13

mo Ganobad

Matrix: Solid

Job ID: 890-3350-1

Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: FS07 Lab Sample ID: 890-3350-2

Date Collected: 11/01/22 09:30 Matrix: Solid Date Received: 11/01/22 12:43

Sample Depth: 3'

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

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1 4-Diffuorobenzene (Surr)	95	70 130	11/01/22 17:00	11/03/22 00:57	

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398 U	0.00398	ma/Ka			11/03/22 16:02	1

1		
Method: SW846 8015 NM -	Discal Dance Occasion	(DDO) (CC)
I WETDOO'S WAAH AU15 NW .	. Diesei Ranne Ornanics	(I)R()) ((=(.)

Analyte	Result	Qualifier	RL	MDL U	Init	D	Prepared	Analyzed	Dil Fac	
Total TPH	<50.0	U	50.0	m	na/Ka			11/04/22 11:08	1	

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/03/22 08:35	11/04/22 00:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/03/22 08:35	11/04/22 00:52	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/03/22 08:35	11/04/22 00:52	1
Surrogate	%Recovery	Qualifier	l imite				Prenared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89	70 - 130	11/03/22 08:35	11/04/22 00:52	1
o-Terphenyl	85	70 - 130	11/03/22 08:35	11/04/22 00:52	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D)	Prepared	Analyzed	Dil Fac
Chloride	171		4.99		mg/Kg				11/02/22 17:19	1

Client Sample ID: FS08 Lab Sample ID: 890-3350-3

Date Collected: 11/01/22 09:40 Date Received: 11/01/22 12:43

Sample Depth: 3'

Method: SW846	S 2021R - Volatile	Organic (Compounds	(CC)

method: 011040 0021B - Volatile Original Compounds (CO)									
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
<0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 15:48	1	
< 0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 15:48	1	
< 0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 15:48	1	
<0.00398	U	0.00398		mg/Kg		11/02/22 15:00	11/03/22 15:48	1	
< 0.00199	U	0.00199		mg/Kg		11/02/22 15:00	11/03/22 15:48	1	
<0.00398	U	0.00398		mg/Kg		11/02/22 15:00	11/03/22 15:48	1	
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
99		70 - 130				11/02/22 15:00	11/03/22 15:48	1	
	Result <0.00199 <0.00199 <0.00199 <0.00398 <0.00398 <0.00398 <%Recovery	Result Qualifier	Result Qualifier RL <0.00199	Result Qualifier RL MDL <0.00199	Result Qualifier RL MDL Unit <0.00199	Result Qualifier RL MDL Unit D <0.00199	Result Qualifier RL MDL Unit D Prepared <0.00199	Result Qualifier RL MDL Unit D Prepared Analyzed <0.00199	

4-Bromofluorobenzene (Surr)	99	70 -	_ 130	11/02/22 15:00	11/03/22 15:48	1
1,4-Difluorobenzene (Surr)	98	70 -	- 130	11/02/22 15:00	11/03/22 15:48	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	כ	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		ma/Ka			11/03/22 16:34	1

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			11/04/22 11:08	1

Eurofins Carlsbad

Matrix: Solid

Client Sample Results

Client: Ensolum Job ID: 890-3350-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: FS08

Date Collected: 11/01/22 09:40 Date Received: 11/01/22 12:43

Sample Depth: 3'

Lab Sample ID: 890-3350-3

Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) Result Qualifier Analyte RL MDL Unit D Analyzed Dil Fac Prepared <50.0 U 50.0 11/03/22 08:35 11/04/22 01:14 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 50.0 11/04/22 01:14 <50.0 U mg/Kg 11/03/22 08:35 C10-C28) mg/Kg OII Range Organics (Over C28-C36) <50.0 U 50.0 11/03/22 08:35 11/04/22 01:14 %Recovery Dil Fac Qualifier Limits Prepared Analyzed Surrogate 1-Chlorooctane 83 70 - 130 11/03/22 08:35 11/04/22 01:14 o-Terphenyl 79 70 - 130 11/03/22 08:35 11/04/22 01:14

ı	Dil Fac	
	DIIFac	

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble Result Qualifier Prepared Analyte RL MDL Unit D Analyzed 5.00 11/02/22 17:42 Chloride 169 mg/Kg

Surrogate Summary

Job ID: 890-3350-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-20908-A-2-B MS	Matrix Spike	103	110	
880-20908-A-2-C MSD	Matrix Spike Duplicate	98	110	
880-20981-A-1-B MS	Matrix Spike	91	93	
880-20981-A-1-C MSD	Matrix Spike Duplicate	46 S1-	71	
890-3319-A-1-F MS	Matrix Spike	94	106	
890-3319-A-1-G MSD	Matrix Spike Duplicate	99	108	
890-3350-1	FS06	97	96	
890-3350-2	FS07	100	95	
890-3350-3	FS08	99	98	
LCS 880-38415/1-A	Lab Control Sample	91	105	
LCS 880-38420/1-A	Lab Control Sample	92	108	
LCS 880-38465/1-A	Lab Control Sample	95	99	
LCSD 880-38415/2-A	Lab Control Sample Dup	93	110	
LCSD 880-38420/2-A	Lab Control Sample Dup	99	98	
LCSD 880-38465/2-A	Lab Control Sample Dup	98	94	
MB 880-38415/5-A	Method Blank	85	94	
MB 880-38420/5-A	Method Blank	81	91	
MB 880-38465/5-A	Method Blank	98	91	
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)	
890-3350-1	FS06	98	91	
890-3350-1 MS	FS06	67 S1-	61 S1-	
890-3350-1 MSD	FS06	85	74	
890-3350-2	FS07	89	85	
890-3350-3	FS08	83	79	
LCS 880-38586/2-A	Lab Control Sample	99	89	
LCSD 880-38586/3-A	Lab Control Sample Dup	105	105	
MB 880-38586/1-A	Method Blank	83	80	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum Job ID: 890-3350-1 SDG: 03A1987053 Project/Site: EP USA 3

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-38415/5-A

Matrix: Solid Analysis Batch: 38442 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38415

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:07	11/02/22 10:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:07	11/02/22 10:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:07	11/02/22 10:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/01/22 15:07	11/02/22 10:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:07	11/02/22 10:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/01/22 15:07	11/02/22 10:53	1

MB MB

Surrogate	%Recovery Qu	ualifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85	70 - 130	11/01/22 15:07	11/02/22 10:53	1
1,4-Difluorobenzene (Surr)	94	70 - 130	11/01/22 15:07	11/02/22 10:53	1

Lab Sample ID: LCS 880-38415/1-A

Matrix: Solid

Analysis Batch: 38442

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38415

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1004		mg/Kg		100	70 - 130	
Toluene	0.100	0.08754		mg/Kg		88	70 - 130	
Ethylbenzene	0.100	0.08210		mg/Kg		82	70 - 130	
m-Xylene & p-Xylene	0.200	0.1676		mg/Kg		84	70 - 130	
o-Xylene	0.100	0.08632		mg/Kg		86	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: LCSD 880-38415/2-A

Matrix: Solid

Analysis Batch: 38442

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 38415

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1038		mg/Kg		104	70 - 130	3	35	
Toluene	0.100	0.08958		mg/Kg		90	70 - 130	2	35	
Ethylbenzene	0.100	0.08377		mg/Kg		84	70 - 130	2	35	
m-Xylene & p-Xylene	0.200	0.1698		mg/Kg		85	70 - 130	1	35	
o-Xylene	0.100	0.08507		mg/Kg		85	70 - 130	1	35	

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	93	70 - 130
1,4-Difluorobenzene (Surr)	110	70 - 130

Lab Sample ID: 890-3319-A-1-F MS

Matrix: Solid

Analysis Batch: 38442

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

Prep Batch: 38415

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00202	U	0.0998	0.09552		mg/Kg		96	70 - 130	
Toluene	<0.00202	U	0.0998	0.08259		mg/Kg		82	70 - 130	

Eurofins Carlsbad

Page 9 of 25

QC Sample Results

Client: Ensolum Job ID: 890-3350-1 Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: 890-3319-A-1-G MSD

Analysis Batch: 38442

Lab Sample ID: 890-3319-A-1-F MS	Client Sample ID: Matrix Spike
Matrix: Solid	Prep Type: Total/NA

Prep Batch: 38415

	Sample	Sample	Spike	INIO	IVIS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Ethylbenzene	<0.00202	U	0.0998	0.07590		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1548		mg/Kg		78	70 - 130
o-Xylene	<0.00202	U	0.0998	0.07740		mg/Kg		78	70 - 130

MS MS

Surrogate	%Recovery	Qualifier	Limits	
4-Bromofluorobenzene (Surr)	94		70 - 130	
1,4-Difluorobenzene (Surr)	106		70 - 130	

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 38415

Analysis Batch: 38442

Matrix: Solid

Sample Sample Spike MSD MSD RPD Result Qualifier Added Result Qualifier RPD Limit Analyte Unit %Rec Limits 0.0990 Benzene <0.00202 U 0.09441 mg/Kg 95 70 - 130 35 Toluene <0.00202 U 0.0990 0.07862 79 70 - 130 35 mg/Kg 5 Ethylbenzene <0.00202 U 0.0990 0.07386 mg/Kg 75 70 - 130 3 35 <0.00403 U 0.198 0.1485 75 70 - 130 35 m-Xylene & p-Xylene mg/Kg 0.0990 <0.00202 U 0.07377 75 70 - 130 o-Xylene mg/Kg

MSD MSD

Surrogate	%Recovery	Qualifier	Limits	
4-Bromofluorobenzene (Surr)	99		70 - 130	
1,4-Difluorobenzene (Surr)	108		70 - 130	

Lab Sample ID: MB 880-38420/5-A

Matrix: Solid

Analysis Batch: 38442

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38420

MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:19	11/02/22 22:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:19	11/02/22 22:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:19	11/02/22 22:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/01/22 15:19	11/02/22 22:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:19	11/02/22 22:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/01/22 15:19	11/02/22 22:12	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	F	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130	11/0	01/22 15:19	11/02/22 22:12	1
1,4-Difluorobenzene (Surr)	91		70 - 130	11/0	01/22 15:19	11/02/22 22:12	1

Lab Sample ID: LCS 880-38420/1-A

Matrix: Solid

Ana

Analysis Batch: 38442

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38420

	Spike	LCS	LCS				%Rec	
alyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
nzene	 0.100	0.1038		mg/Kg		104	70 - 130	
uene	0.100	0.08908		ma/Ka		89	70 130	

Benz Toluene Ethylbenzene 0.100 0.08192 mg/Kg 82 70 - 130 m-Xylene & p-Xylene 0.200 0.1665 mg/Kg 83 70 - 130

QC Sample Results

 Client: Ensolum
 Job ID: 890-3350-1

 Project/Site: EP USA 3
 SDG: 03A1987053

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

Lab Sample ID: LCS 880-38420/1-A

Matrix: Solid

Analysis Batch: 38442

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38420

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
o-Xylene	0.100	0.08367		mg/Kg		84	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: LCSD 880-38420/2-A

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 38442

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1125		mg/Kg		113	70 - 130	8	35
Toluene	0.100	0.09874		mg/Kg		99	70 - 130	10	35
Ethylbenzene	0.100	0.09245		mg/Kg		92	70 - 130	12	35
m-Xylene & p-Xylene	0.200	0.1906		mg/Kg		95	70 - 130	14	35
o-Xylene	0.100	0.09544		mg/Kg		95	70 - 130	13	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 880-20908-A-2-B MS

Matrix: Solid

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

Analysis Batch: 38442 Prep Batch: 38420

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.0998	0.07652		mg/Kg		77	70 - 130	
Toluene	<0.00201	U F1	0.0998	0.04969	F1	mg/Kg		50	70 - 130	
Ethylbenzene	<0.00201	U F1	0.0998	0.03950	F1	mg/Kg		40	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.07556	F1	mg/Kg		38	70 - 130	
o-Xylene	<0.00201	U F1	0.0998	0.03627	F1	mg/Kg		36	70 - 130	

	IVIS I	IVIS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1.4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: 880-20908-A-2-C MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Total/NA
Analysis Batch: 38442 Prep Batch: 38420

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0990	0.07508		mg/Kg		76	70 - 130	2	35
Toluene	<0.00201	U F1	0.0990	0.04880	F1	mg/Kg		49	70 - 130	2	35
Ethylbenzene	<0.00201	U F1	0.0990	0.03713	F1	mg/Kg		38	70 - 130	6	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.07079	F1	mg/Kg		36	70 - 130	7	35
o-Xylene	<0.00201	U F1	0.0990	0.03414	F1	mg/Kg		34	70 - 130	6	35

Eurofins Carlsbad

Released to Imaging: 5/17/2023 8:58:09 AM

2

3

5

6

8

10

Prep Batch: 38420

12

13

Client: Ensolum Job ID: 890-3350-1 SDG: 03A1987053 Project/Site: EP USA 3

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

Lab Sample ID: 880-20908-A-2-C MSD

Matrix: Solid

Analysis Batch: 38442

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 38420

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: MB 880-38465/5-A

Matrix: Solid

Analysis Batch: 38581

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38465

мв мв

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/02/22 15:00	11/03/22 10:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/02/22 15:00	11/03/22 10:56	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98	70 - 130	11/02/22 15:00	11/03/22 10:56	1
1,4-Difluorobenzene (Surr)	91	70 - 130	11/02/22 15:00	11/03/22 10:56	1

Lab Sample ID: LCS 880-38465/1-A

Matrix: Solid

Analysis Batch: 38581

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38465

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07921		mg/Kg		79	70 - 130	
Toluene	0.100	0.08140		mg/Kg		81	70 - 130	
Ethylbenzene	0.100	0.08324		mg/Kg		83	70 - 130	
m-Xylene & p-Xylene	0.200	0.1632		mg/Kg		82	70 - 130	
o-Xylene	0.100	0.09295		mg/Kg		93	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	95	70 - 130
1,4-Difluorobenzene (Surr)	99	70 - 130

Lab Sample ID: LCSD 880-38465/2-A

Matrix: Solid

Analysis Batch: 38581

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 38465

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08528		mg/Kg		85	70 - 130	7	35
Toluene	0.100	0.08804		mg/Kg		88	70 - 130	8	35
Ethylbenzene	0.100	0.09032		mg/Kg		90	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1781		mg/Kg		89	70 - 130	9	35
o-Xylene	0.100	0.1002		mg/Kg		100	70 - 130	8	35

LCSD LCSD

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

Client: Ensolum Job ID: 890-3350-1 Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: LCSD 880-38465/2-A

Matrix: Solid

Analysis Batch: 38581

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 38465

LCSD LCSD

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

Client Sample ID: Matrix Spike Lab Sample ID: 880-20981-A-1-B MS Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 38581									Prep	Batch: 38465
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00202	U F1 F2	0.0990	0.07448	-	mg/Kg		74	70 - 130	
Toluene	<0.00202	U F1	0.0990	0.07129		mg/Kg		72	70 - 130	
Ethylbenzene	<0.00202	U F1 F2	0.0990	0.06359	F1	mg/Kg		64	70 - 130	
m-Xylene & p-Xylene	0.00417	F1 F2	0.198	0.1265	F1	mg/Kg		62	70 - 130	
o-Xylene	<0.00202	U F1 F2	0.0990	0.06683	F1	mg/Kg		67	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	91	70 - 130
1,4-Difluorobenzene (Surr)	93	70 - 130

Lab Sample ID: 880-20981-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 38581

Prep Type: Total/NA

Prep Batch: 38465

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00202	U F1 F2	0.0994	0.03522	F1 F2	mg/Kg		34	70 - 130	72	35
Toluene	<0.00202	U F1	0.0994	0.05260	F1	mg/Kg		53	70 - 130	30	35
Ethylbenzene	<0.00202	U F1 F2	0.0994	0.03748	F1 F2	mg/Kg		38	70 - 130	52	35
m-Xylene & p-Xylene	0.00417	F1 F2	0.199	0.06178	F1 F2	mg/Kg		29	70 - 130	69	35
o-Xylene	<0.00202	U F1 F2	0.0994	0.03257	F1 F2	mg/Kg		33	70 - 130	69	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits			
4-Bromofluorobenzene (Surr)	46	S1-	70 - 130			
1,4-Difluorobenzene (Surr)	71		70 - 130			

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

Lab Sample ID: MB 880-38586/1-A

Released to Imaging: 5/17/2023 8:58:09 AM

Matrix: Solid

Analysis Batch: 38574

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

Prep Batch: 38586

ı		111.0	IVID							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Gasoline Range Organics	<50.0	U	50.0		mg/Kg		11/03/22 08:35	11/03/22 22:42	1
	(GRO)-C6-C10									
	Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		11/03/22 08:35	11/03/22 22:42	1
	C10-C28)									
	OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/03/22 08:35	11/03/22 22:42	1
ı										

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130	11/03/22 08:35	11/03/22 22:42	1
o-Terphenyl	80		70 - 130	11/03/22 08:35	11/03/22 22:42	1

Client: Ensolum Job ID: 890-3350-1 Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: LCS 880-38586/2-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA Prep Batch: 38586

Analysis Batch: 38574

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	887.3		mg/Kg		89	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1144		mg/Kg		114	70 - 130	
C10-C28)								

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	89		70 - 130

Lab Sample ID: LCSD 880-38586/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Diesel Range Organics (Over

Analysis Batch: 38574		Prep Batch: 38586							
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1084		mg/Kg		108	70 - 130	20	20
(GRO)-C6-C10									

1300

mg/Kg

130

70 - 130

1000

C10-C28)

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

Lab Sample ID: 890-3350-1 MS **Client Sample ID: FS06 Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 38574 Prep Batch: 38586 Sample Sample Spike MS MS %Rec Added Analyte Result Qualifier Result Qualifier Unit %Rec Limits

76 Gasoline Range Organics 59.2 997 819.8 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U F2 997 747.7 75 70 - 130 mg/Kg C10-C28)

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	67	S1-	70 - 130
o-Ternhenyl	61	S1-	70 130

Lab Sample ID: 890-3350-1 MSD

Client Sample ID: FS06 Matrix: Solid Prep Type: Total/NA

Analysis Batch: 38574

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	59.2		999	958.5		mg/Kg		90	70 - 130	16	20	
(GRO)-C6-C10												
Diesel Range Organics (Over	<50.0	U F2	999	926.8	F2	mg/Kg		93	70 - 130	21	20	
C10-C28)												

Diesel Range Organics (Over C10-C28)	<50.0	U F2	999	926.8 F2	mg/Kg	93	70 - 130	21	20
	MSD	MSD							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	85		70 - 130						

Eurofins Carlsbad

Prep Batch: 38586

Prep Type: Total/NA

Job ID: 890-3350-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: 890-3350-1 MSD **Matrix: Solid**

Analysis Batch: 38574

Client Sample ID: FS06 Prep Type: Total/NA Prep Batch: 38586

MSD MSD

Surrogate %Recovery Qualifier Limits o-Terphenyl 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38446/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38534

MB MB

Analyte Result Qualifier RL MDL Unit D Analyzed Dil Fac Prepared Chloride <5.00 5.00 11/02/22 14:38 U mg/Kg

Lab Sample ID: LCS 880-38446/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 38534

LCS LCS Spike %Rec Added Result Qualifier Analyte Unit %Rec Limits Chloride 250 266.4 mg/Kg 107 90 - 110

Lab Sample ID: LCSD 880-38446/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38534

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 262.4 90 - 110 mg/Kg 105

Lab Sample ID: 890-3341-A-4-C MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 38534

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Qualifier Unit %Rec Result Limits Chloride <4.96 U 248 251.9 101 90 - 110 mg/Kg

Lab Sample ID: 890-3341-A-4-D MSD

Matrix: Solid

Analysis Batch: 38534

Sample Sample Spike MSD MSD %Rec RPD Qualifier Added Qualifier Limits RPD Limit Analyte Result Result Unit %Rec Chloride Ū 248 104 <4.96 259.6 90 - 110 20 mg/Kg

Eurofins Carlsbad

Prep Type: Soluble

Client Sample ID: Matrix Spike Duplicate

QC Association Summary

 Client: Ensolum
 Job ID: 890-3350-1

 Project/Site: EP USA 3
 SDG: 03A1987053

GC VOA

Prep Batch: 38415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3350-1	FS06	Total/NA	Solid	5035	
MB 880-38415/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38415/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38415/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3319-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-3319-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 38420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3350-2	FS07	Total/NA	Solid	5035	<u> </u>
MB 880-38420/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38420/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38420/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20908-A-2-B MS	Matrix Spike	Total/NA	Solid	5035	
880-20908-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 38442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3350-1	FS06	Total/NA	Solid	8021B	38415
890-3350-2	FS07	Total/NA	Solid	8021B	38420
MB 880-38415/5-A	Method Blank	Total/NA	Solid	8021B	38415
MB 880-38420/5-A	Method Blank	Total/NA	Solid	8021B	38420
LCS 880-38415/1-A	Lab Control Sample	Total/NA	Solid	8021B	38415
LCS 880-38420/1-A	Lab Control Sample	Total/NA	Solid	8021B	38420
LCSD 880-38415/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38415
LCSD 880-38420/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38420
880-20908-A-2-B MS	Matrix Spike	Total/NA	Solid	8021B	38420
880-20908-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	38420
890-3319-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	38415
890-3319-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	38415

Prep Batch: 38465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3350-3	FS08	Total/NA	Solid	5035	
MB 880-38465/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38465/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38465/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20981-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-20981-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 38581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3350-3	FS08	Total/NA	Solid	8021B	38465
MB 880-38465/5-A	Method Blank	Total/NA	Solid	8021B	38465
LCS 880-38465/1-A	Lab Control Sample	Total/NA	Solid	8021B	38465
LCSD 880-38465/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38465
880-20981-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	38465
880-20981-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	38465

Eurofins Carlsbad

2

3

Δ

6

Ω

9

11

QC Association Summary

 Client: Ensolum
 Job ID: 890-3350-1

 Project/Site: EP USA 3
 SDG: 03A1987053

GC VOA

Analysis Batch: 38654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3350-1	FS06	Total/NA	Solid	Total BTEX	
890-3350-2	FS07	Total/NA	Solid	Total BTEX	
890-3350-3	FS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 38574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3350-1	FS06	Total/NA	Solid	8015B NM	38586
890-3350-2	FS07	Total/NA	Solid	8015B NM	38586
890-3350-3	FS08	Total/NA	Solid	8015B NM	38586
MB 880-38586/1-A	Method Blank	Total/NA	Solid	8015B NM	38586
LCS 880-38586/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38586
LCSD 880-38586/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38586
890-3350-1 MS	FS06	Total/NA	Solid	8015B NM	38586
890-3350-1 MSD	FS06	Total/NA	Solid	8015B NM	38586

Prep Batch: 38586

Client Sample ID	Prep Type	Matrix	Method	Prep Batch
FS06	Total/NA	Solid	8015NM Prep	
FS07	Total/NA	Solid	8015NM Prep	
FS08	Total/NA	Solid	8015NM Prep	
Method Blank	Total/NA	Solid	8015NM Prep	
Lab Control Sample	Total/NA	Solid	8015NM Prep	
Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
FS06	Total/NA	Solid	8015NM Prep	
FS06	Total/NA	Solid	8015NM Prep	
	FS06 FS07 FS08 Method Blank Lab Control Sample Lab Control Sample Dup FS06	FS06 Total/NA FS07 Total/NA FS08 Total/NA Method Blank Total/NA Lab Control Sample Total/NA Lab Control Sample Dup Total/NA FS06 Total/NA	FS06 Total/NA Solid FS07 Total/NA Solid FS08 Total/NA Solid Method Blank Total/NA Solid Lab Control Sample Total/NA Solid Lab Control Sample Dup Total/NA Solid FS06 Total/NA Solid	FS06 Total/NA Solid 8015NM Prep FS07 Total/NA Solid 8015NM Prep FS08 Total/NA Solid 8015NM Prep Method Blank Total/NA Solid 8015NM Prep Lab Control Sample Total/NA Solid 8015NM Prep Lab Control Sample Dup Total/NA Solid 8015NM Prep FS06 Total/NA Solid 8015NM Prep

Analysis Batch: 38722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3350-1	FS06	Total/NA	Solid	8015 NM	
890-3350-2	FS07	Total/NA	Solid	8015 NM	
890-3350-3	FS08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 38446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3350-1	FS06	Soluble	Solid	DI Leach	
890-3350-2	FS07	Soluble	Solid	DI Leach	
890-3350-3	FS08	Soluble	Solid	DI Leach	
MB 880-38446/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38446/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38446/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3341-A-4-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3341-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 38534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3350-1	FS06	Soluble	Solid	300.0	38446
890-3350-2	FS07	Soluble	Solid	300.0	38446
890-3350-3	FS08	Soluble	Solid	300.0	38446

Eurofins Carlsbad

2

3

4

6

8

10

12

13

QC Association Summary

 Client: Ensolum
 Job ID: 890-3350-1

 Project/Site: EP USA 3
 SDG: 03A1987053

HPLC/IC (Continued)

Analysis Batch: 38534 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38446/1-A	Method Blank	Soluble	Solid	300.0	38446
LCS 880-38446/2-A	Lab Control Sample	Soluble	Solid	300.0	38446
LCSD 880-38446/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38446
890-3341-A-4-C MS	Matrix Spike	Soluble	Solid	300.0	38446
890-3341-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	38446

3

4

6

Q

9

11

13

Job ID: 890-3350-1

Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: FS06 Lab Sample ID: 890-3350-1 Date Collected: 11/01/22 09:20

Matrix: Solid

Date Received: 11/01/22 12:43

	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	38415	11/02/22 15:07	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38442	11/02/22 19:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38654	11/03/22 16:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			38722	11/04/22 11:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38586	11/03/22 08:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38574	11/03/22 23:47	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	38446	11/02/22 08:10	СН	EET MID
Soluble	Analysis	300.0		1			38534	11/02/22 17:11	CH	EET MID

Lab Sample ID: 890-3350-2 **Client Sample ID: FS07**

Date Collected: 11/01/22 09:30 **Matrix: Solid**

Date Received: 11/01/22 12:43

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 5.03 g Total/NA Prep 5 mL 38420 11/01/22 17:00 MNR EET MID 8021B Total/NA 5 mL 11/03/22 00:57 **EET MID** Analysis 1 5 mL 38442 MNR Total/NA Total BTEX 38654 11/03/22 16:02 Analysis 1 SM **EET MID** Total/NA Analysis 8015 NM 38722 11/04/22 11:08 SM **EET MID** Total/NA 8015NM Prep 38586 Prep 10.00 g 10 mL 11/03/22 08:35 DM EET MID Total/NA Analysis 8015B NM 1 uL 1 uL 38574 11/04/22 00:52 SM **EET MID** Soluble 5.01 g Leach DI Leach 50 mL 38446 11/02/22 08:10 CH **EET MID** Soluble Analysis 300.0 38534 11/02/22 17:19 СН **EET MID**

Client Sample ID: FS08 Lab Sample ID: 890-3350-3

Date Collected: 11/01/22 09:40 Date Received: 11/01/22 12:43

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	38465	11/02/22 15:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38581	11/03/22 15:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38654	11/03/22 16:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			38722	11/04/22 11:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38586	11/03/22 08:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38574	11/04/22 01:14	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	38446	11/02/22 08:10	СН	EET MID
Soluble	Analysis	300.0		1			38534	11/02/22 17:42	CH	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
 Job ID: 890-3350-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Laboratory: Eurofins Midland

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

Authority		ogram	Identification Number	Expiration Date	
Texas	NE	ELAP	T104704400-22-24	06-30-23	
The following analytes	are included in this report by	it the leberatory is not contiffi	iad butba gaugeming authority. This list ma		
the agency does not of	' '	it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for v	
,	' '	Matrix	Analyte	ay include analytes for v	
the agency does not of	fer certification.	•	, , ,	ay include analytes for v	

6

8

10

12

13

Method Summary

 Client: Ensolum
 Job ID: 890-3350-1

 Project/Site: EP USA 3
 SDG: 03A1987053

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

202

3

4

9

10

40

13

Sample Summary

Client: Ensolum

Project/Site: EP USA 3

Job ID: 890-3350-1

SDG: 03A1987053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
890-3350-1	FS06	Solid	11/01/22 09:20	11/01/22 12:43	3'
890-3350-2	FS07	Solid	11/01/22 09:30	11/01/22 12:43	3'
890-3350-3	FS08	Solid	11/01/22 09:40	11/01/22 12:43	3'

Relinquisher

by: (Signature)

SA SA SA

1/22

3

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date 08/25/2020 Rev 2020.2

Received by: (Signature)

eurofins

Xenco

Environment Testing Chain of Custody

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

Work Order No:				
www.xenco.com	Page	_	으 	_
 Work Order Comments	mments			
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	elds 🗌 RF	C 5	Superi	nnd 🗆
State of Project:				
Reporting: Level II Level III PST/UST TRRP Level IV	JST 🛮 TR	RP _	Leve	N □
]			

lione.	000-001-0002		Cities.	Cindia Documenta South State of the Control of the	0111.00	1						
Project Name:	EP USA 3		Turn.	Turn Around					ANALYSIS REC	REQUEST	Preserv	Preservative Codes
Project Number:	03A1987053	3	✓ Routine	Rush	Pres. Code						None: NO	DI Water: H ₂ O
Project Location:	Eddy County, NM		Due Date:	5 Day TAT							Cool: Cool	MeOH: Me
Sampler's Name:	Gilbert Moreno	о О	TAT starts the	TAT starts the day received by				-			HCL: HC	HNO3: HN
CC#	1061155101		the lab, if rece	the lab, if received by 4:30pm	rs			T			H ₂ S0 ₄ : H ₂	NaOH: Na
SAMPLE RECEIPT	Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	nete	.0)					H₃PO₄: HP	
Samples Received Intact:	(Pe) No	Thermometer ID:	yr ID:	Ton SO	ıran	300					NaHSO ₄ : NABIS	S
Cooler Custody Seals:	Yes No TOM	Correction Factor	actor:	0.0	Pa	PA:					Na ₂ S ₂ O ₃ : NaSO ₃	03
Sample Custody Seals:	Yes No NA	Temperature Reading:	Reading:	3,2		S (E			890-3350 Chain of Custody	tody	Zn Acetate+NaOH: Zn	aOH: Zn
Total Containers:		Corrected Temperature:	emperature:	30		IDE)15)	8021		-	NaOH+Ascorbic Acid: SAPC	ic Acid: SAPC
Sample Identification	ition Matrix	Date Sampled	Time Sampled	Depth Grab/ Comp	# of Cont	CHLOR	TPH (8	втех (Sample	Sample Comments
FS06	S	11.1.22	9:20	3' Comp	_	×	×	×				
FS07	S	11.1.22	9:30	3' Comp	2	×	×	×				
FS08	S	11.1.22	9:40	3' Comp	ယ	×	×	×	1		Incider	Incident Numbers
											NAB16	NAB1622531873
	/	1, 1.2		1								
	bis	=										
	0											
\												
Total 200.7 / 6010	200.8 / 6020:	81	8RCRA 13PPM	PM Texas 11 Al Sb	≥		As Ba Be		B Cd Ca Cr Co Cu Fe Pb	Mg Mn Mo Ni K Se	Ag SiO2 Na Sr TI Sn U V Zn	J V Zn
Circle Method(s) and Metal(s) to be analyzed	etal(s) to be analy	zed	TCLP / SF	PLP 6010: 8R	CRA	Sb A	s Ba	Be (TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo I	Mo Ni Se Ag TI U	Hg: 1631 / 245.1 / 7470 / 7471	/7471
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcont 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 i	nent and relinquishment be liable only for the co	of samples cons	stitutes a valid p	urchase order from	n client o	compan ny loss	y to Eur es or ex	ofins X	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	ractors. It assigns standard terms and conditions osses are due to circumstances beyond the contro	conditions the control	
if Eurofins Xenco. A minimum	charge of \$85.00 will be	applied to each	project and a ch	narge of \$5 for eac	n sample	submit	tted to E	urofins	of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	s will be enforced unless previou	sly negotiated.	

Address:

Project Manager:

Bill to: (if different)

Jim Raley

Company Name:

WPX

Company Name:

Ensolum Ben Belill

City, State ZIP:

Carlsbad, NM 88220

City, State ZIP:

Carlsbad, NM 88220

5315 Buena Vista Dr

3122 National Parks HWY

989-854-0852

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3350-1 SDG Number: 03A1987053

Login Number: 3350 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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

7 **0) 202**

1

3

4

O

۹ Q

9

11

15

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3350-1 SDG Number: 03A1987053

Login Number: 3350
List Source: Eurofins Midland
List Number: 2
List Creation: 11/02/22 11:49 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	

3

4

6

8

10

12

16

| | 4

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team
Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 12/19/2022 4:38:19 PM

JOB DESCRIPTION

EP USA 3 SDG NUMBER 03A1987053

JOB NUMBER

890-3592-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

Authorization

Generated 12/19/2022 4:38:19 PM

Authorized for release by Jessica Kramer, Project Manager <u>Jessica.Kramer@et.eurofinsus.com</u> (432)704-5440 19 PM

13

Client: Ensolum
Project/Site: EP USA 3
Laboratory Job ID: 890-3592-1
SDG: 03A1987053

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	7
QC Sample Results	8
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receipt Checklists	19

3

5

6

8

10

11

13

Definitions/Glossary

Job ID: 890-3592-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

Qualifiers

GC VOA

Qualifier **Qualifier Description**

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

GC Semi VOA

Qualifier **Qualifier Description**

S1+ Surrogate recovery exceeds control limits, high 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

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

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

DLC Decision Level Concentration (Radiochemistry)

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

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

Released to Imaging: 5/17/2023 8:58:09 AM

TNTC Too Numerous To Count

Case Narrative

 Client: Ensolum
 Job ID: 890-3592-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Job ID: 890-3592-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3592-1

Receipt

The sample was received on 12/6/2022 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.6°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-41938 and analytical batch 880-41993 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-41386 and analytical batch 880-41561 was outside the upper control limits.

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

HPLC/IC

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

1

2

3

6

1

9

12

13

| | 4

Matrix: Solid

Lab Sample ID: 890-3592-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-3592-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Client Sample ID: SW05

Date Collected: 12/06/22 10:40 Date Received: 12/06/22 16:20

Sample Depth: 0 - 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/17/22 04:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/17/22 04:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/17/22 04:19	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/15/22 14:55	12/17/22 04:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/17/22 04:19	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/15/22 14:55	12/17/22 04:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130				12/15/22 14:55	12/17/22 04:19	1
1,4-Difluorobenzene (Surr)	102		70 - 130				12/15/22 14:55	12/17/22 04:19	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/19/22 16:21	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/13/22 09:37	1
- Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/08/22 15:23	12/12/22 16:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/08/22 15:23	12/12/22 16:48	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/08/22 15:23	12/12/22 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130				12/08/22 15:23	12/12/22 16:48	1
o-Terphenyl	120		70 - 130				12/08/22 15:23	12/12/22 16:48	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	graphy - So	oluble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

5.03

mg/Kg

253

Eurofins Carlsbad

12/14/22 11:19

Chloride

Surrogate Summary

Client: Ensolum Job ID: 890-3592-1 Project/Site: EP USA 3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

-			
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-22323-A-21-E MS	Matrix Spike	89	100
880-22323-A-21-F MSD	Matrix Spike Duplicate	106	94
890-3592-1	SW05	118	102
LCS 880-41938/1-A	Lab Control Sample	96	99
LCSD 880-41938/2-A	Lab Control Sample Dup	90	97
MB 880-41899/5-A	Method Blank	102	87
MB 880-41938/5-A	Method Blank	92	93
Surrogate Legend			
BFB = 4-Bromofluoroben	zene (Surr)		

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3585-A-1-C MS	Matrix Spike	104	102	
890-3585-A-1-D MSD	Matrix Spike Duplicate	109	105	
890-3592-1	SW05	106	120	
LCS 880-41386/2-A	Lab Control Sample	103	107	
LCSD 880-41386/3-A	Lab Control Sample Dup	111	118	
MB 880-41386/1-A	Method Blank	136 S1+	197 S1+	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3592-1 SDG: 03A1987053 Project/Site: EP USA 3

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-41899/5-A

Matrix: Solid

Analysis Batch: 41993

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41899

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/15/22 10:18	12/16/22 10:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/15/22 10:18	12/16/22 10:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/15/22 10:18	12/16/22 10:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/15/22 10:18	12/16/22 10:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/15/22 10:18	12/16/22 10:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/15/22 10:18	12/16/22 10:53	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	12/15/22 10:	12/16/22 10:53	1
1,4-Difluorobenzene (Surr)	87		70 - 130	12/15/22 10:	18 12/16/22 10:53	1

Lab Sample ID: MB 880-41938/5-A

Matrix: Solid

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41938

Analysis Batch: 41993

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/16/22 22:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/16/22 22:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/16/22 22:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/15/22 14:55	12/16/22 22:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/16/22 22:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/15/22 14:55	12/16/22 22:04	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	12/15/22 14:55	12/16/22 22:04	1
1,4-Difluorobenzene (Surr)	93		70 - 130	12/15/22 14:55	12/16/22 22:04	1

Lab Sample ID: LCS 880-41938/1-A

Matrix: Solid

Analysis Batch: 41993

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 41938

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09576		mg/Kg		96	70 - 130	
Toluene	0.100	0.08860		mg/Kg		89	70 - 130	
Ethylbenzene	0.100	0.08429		mg/Kg		84	70 - 130	
m-Xylene & p-Xylene	0.200	0.1814		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.09253		mg/Kg		93	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	96	70 - 130
1.4-Difluorobenzene (Surr)	99	70 - 130

Lab Sample ID: LCSD 880-41938/2-A

Matrix: Solid

Analysis Batch: 41993

Client Sample ID: Lab	Control Sample Dup
	Dren Trees Total/NA

Prep Type: Total/NA

Prep Batch: 41938

	Бріке	LCSD LCSD				%Rec		RPD	
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.09194	mg/Kg		92	70 - 130	4	35	

Job ID: 890-3592-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: LCSD 880-41938/2-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 41993** Prep Batch: 41938 Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Toluene 0.100 0.08473 85 70 - 130 35 mg/Kg 4 Ethylbenzene 0.100 0.07875 mg/Kg 79 70 - 130 0.200 0.1684 70 - 130 m-Xylene & p-Xylene mg/Kg 84 35

0.08556

mg/Kg

86

70 - 130

0.100

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-22323-A-21-E MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid

o-Xylene

Analysis Batch: 41993

Sample	Sample	Spike	MS	MS				%Rec
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
<0.00200	U F1	0.0998	0.06182	F1	mg/Kg		62	70 - 130
<0.00200	U F1	0.0998	0.05097	F1	mg/Kg		51	70 - 130
<0.00200	U F1	0.0998	0.04186	F1	mg/Kg		42	70 - 130
<0.00401	U F1	0.200	0.08464	F1	mg/Kg		42	70 - 130
<0.00200	U F1	0.0998	0.04276	F1	mg/Kg		43	70 - 130
	Result <0.00200 <0.00200 <0.00200 <0.00200 <0.00401	Result Qualifier <0.00200 U F1 <0.00200 U F1 <0.00200 U F1 <0.00401 U F1 <0.00200 U F1	Result Qualifier Added <0.00200	Result Qualifier Added Result <0.00200	Result Qualifier Added Result Qualifier <0.00200	Result Qualifier Added Result Qualifier Unit <0.00200	Result Qualifier Added Result Qualifier Unit D <0.00200	Result Qualifier Added Result Qualifier Unit D %Rec <0.00200

	MS N	ИS	
Surrogate	%Recovery 0	Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		70 - 130
1.4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 880-22323-A-21-F MSD

Matrix: Solid

Analysis Batch: 41993

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

Prep Batch: 41938

Prep Batch: 41938

		Sample	Sample	Spike	MSD	MSD				%Rec		RPD
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
	Benzene	<0.00200	U F1	0.0990	0.04526	F1	mg/Kg		46	70 - 130	31	35
	Toluene	<0.00200	U F1	0.0990	0.04195	F1	mg/Kg		42	70 - 130	19	35
	Ethylbenzene	<0.00200	U F1	0.0990	0.04018	F1	mg/Kg		41	70 - 130	4	35
	m-Xylene & p-Xylene	<0.00401	U F1	0.198	0.08291	F1	mg/Kg		42	70 - 130	2	35
	o-Xylene	<0.00200	U F1	0.0990	0.04209	F1	mg/Kg		43	70 - 130	2	35
ı												

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

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

Lab Sample ID: MB 880-41386/1-A

Matrix: Solid

Analysis Batch: 41561

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

Prep Batch: 41386

	MB	MB						
Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		12/08/22 15:23	12/12/22 08:40	1
(GRO)-C6-C10								

Eurofins Carlsbad

Client: Ensolum Job ID: 890-3592-1 SDG: 03A1987053 Project/Site: EP USA 3

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

Lab	Sa	mple	ID:	MB	880-41386/1-A
	-		-		

Lab Sample ID: LCS 880-41386/2-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 41561

Analysis Batch: 41561

Prep Type: Total/NA

Prep Batch: 41386

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/08/22 15:23	12/12/22 08:40	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/08/22 15:23	12/12/22 08:40	1
	***	***							

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	136	S1+	70 - 130	12/08/22 15:23	12/12/22 08:40	1
o-Terphenyl	197	S1+	70 - 130	12/08/22 15:23	12/12/22 08:40	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41386

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	948.1		mg/Kg		95	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	1070		mg/Kg		107	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: LCSD 880-41386/3-A

Matrix: Solid

Analysis Batch: 41561

ample ID: Lab Control Sample Dup	
Prep Type: Total/NA	
Prep Batch: 41386	

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1111		mg/Kg		111	70 - 130	16	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1206		mg/Kg		121	70 - 130	12	20
C10-C28)									

LCSD LCSD

Sample Sample

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	111	70 - 130
o-Terphenyl	118	70 - 130

Lab Sample ID: 890-3585-A-1-C MS

Analysis Batch: 41561

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

MS MS

Prep Batch: 41386

%Rec

Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <50.0 U 999 888.1 86 70 - 130 mg/Kg (GRO)-C6-C10 <50.0 U 999 867.8 mg/Kg 70 - 130 Diesel Range Organics (Over

Spike

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	102		70 - 130

Eurofins Carlsbad

QC Sample Results

Job ID: 890-3592-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: 890-3585-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Analysis Batch: 41561 Prep Type: Total/NA Prep Batch: 41386

Sample Sample Spike MSD MSD RPD Result Qualifier RPD Limit Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <50.0 U 997 951.5 mg/Kg 92 70 - 130 20 (GRO)-C6-C10 997 895.5 Diesel Range Organics (Over <50.0 U mg/Kg 90 70 - 130 3

C10-C28)

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	105		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41366/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 41730

мв мв

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			12/14/22 07:42	1

Lab Sample ID: LCS 880-41366/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 41730

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	245.5		mg/Kg		98	90 - 110	

Lab Sample ID: LCSD 880-41366/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 41730

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	248 9		ma/Ka		100	90 110		20	

Lab Sample ID: 890-3585-A-8-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 41730

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	246		248	499.6		ma/Ka		102	90 110		_

Lab Sample ID: 890-3585-A-8-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 41730

•	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	246		248	496.9		mg/Kg		101	90 - 110	1	20

Eurofins Carlsbad

Prep Type: Soluble

QC Association Summary

Client: Ensolum Job ID: 890-3592-1 Project/Site: EP USA 3 SDG: 03A1987053

GC VOA

D	- D	-4-	L .	44	000
Pre	p o	atc	n:	41	899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-41899/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 41938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3592-1	SW05	Total/NA	Solid	5035	
MB 880-41938/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-41938/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-41938/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-22323-A-21-E MS	Matrix Spike	Total/NA	Solid	5035	
880-22323-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 41993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3592-1	SW05	Total/NA	Solid	8021B	41938
MB 880-41899/5-A	Method Blank	Total/NA	Solid	8021B	41899
MB 880-41938/5-A	Method Blank	Total/NA	Solid	8021B	41938
LCS 880-41938/1-A	Lab Control Sample	Total/NA	Solid	8021B	41938
LCSD 880-41938/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	41938
880-22323-A-21-E MS	Matrix Spike	Total/NA	Solid	8021B	41938
880-22323-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	41938

Analysis Batch: 42243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3592-1	SW05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 41386

_ •					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3592-1	SW05	Total/NA	Solid	8015NM Prep	
MB 880-41386/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41386/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41386/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3585-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3585-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 41561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3592-1	SW05	Total/NA	Solid	8015B NM	41386
MB 880-41386/1-A	Method Blank	Total/NA	Solid	8015B NM	41386
LCS 880-41386/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41386
LCSD 880-41386/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41386
890-3585-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	41386
890-3585-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	41386

Analysis Batch: 41708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3592-1	SW05	Total/NA	Solid	8015 NM	

QC Association Summary

 Client: Ensolum
 Job ID: 890-3592-1

 Project/Site: EP USA 3
 SDG: 03A1987053

HPLC/IC

Leach Batch: 41366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3592-1	SW05	Soluble	Solid	DI Leach	
MB 880-41366/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41366/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41366/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3585-A-8-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3585-A-8-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 41730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3592-1	SW05	Soluble	Solid	300.0	41366
MB 880-41366/1-A	Method Blank	Soluble	Solid	300.0	41366
LCS 880-41366/2-A	Lab Control Sample	Soluble	Solid	300.0	41366
LCSD 880-41366/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41366
890-3585-A-8-B MS	Matrix Spike	Soluble	Solid	300.0	41366
890-3585-A-8-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	41366

3

5

g

9

10

4.0

13

1 /

Lab Chronicle

 Client: Ensolum
 Job ID: 890-3592-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Client Sample ID: SW05 Lab Sample ID: 890-3592-1

Date Collected: 12/06/22 10:40

Date Received: 12/06/22 16:20

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			4.99 g	5 mL	41938	12/15/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	41993	12/17/22 04:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42243	12/19/22 16:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			41708	12/13/22 09:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	41386	12/08/22 15:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41561	12/12/22 16:48	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	41366	12/08/22 12:15	KS	EET MID
Soluble	Analysis	300.0		1			41730	12/14/22 11:19	CH	EET MID

Laboratory References:

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

3

_

6

8

3

1 1

12

4 /

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-3592-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Laboratory: Eurofins Midland

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

Authority			Identification Number	Expiration Date
Texas			T104704400-22-24	06-30-23
The following analytes	are included in this report by	it the leberatory is not contiffi	iad butba gaugeming authority. This list ma	
the agency does not of	' '	it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for v
,	' '	Matrix	Analyte	ay include analytes for v
the agency does not of	fer certification.	•	, , ,	ay include analytes for v

3

4

5

7

9

10

12

Method Summary

 Client: Ensolum
 Job ID: 890-3592-1

 Project/Site: EP USA 3
 SDG: 03A1987053

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

3

6

8

9

11

4.6

Sample Summary

Client: Ensolum

Project/Site: EP USA 3

Job ID: 890-3592-1 SDG: 03A1987053

 Lab Sample ID
 Client Sample ID
 Matrix
 Collected
 Received
 Depth

 890-3592-1
 SW05
 Solid
 12/06/22 10:40
 12/06/22 16:20
 0 - 3

2

7

8

11

12

4 /

eurofins

Environment Testing

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

Wo
rk Ord
Work Order No:

Project Manager: E	Ben Belill Ensolum		Bill to: (if different) Company Name:	Jim R WPX	Jim Raley WPX			
Name:	Ensolum		Company Name:	5 VT	۲ ×	WPX	?	
City. State ZIP:	Carlsbad, NM 88220		City, State ZIP:	Carl	Isbad, N	Carlsbad, NM 88220	20	- 1
	989-854-0852	Email	Email: BBelill@Ensolum.com, jim.raley@dvn.com	n.com, ji	im.rale	y@dvr	1.com	
Name:	EP USA 3	Tur	Turn Around					
Project Number:	03A1987053	✓ Routine		Pres. Code				
Project Location:	Eddy County, NM	Due Date:	5 Day TAT					
Sampler's Name:	Gilbert Moreno		TAT starts the day received by		-			
CC #:	1061155101	the lab, if re		rs				
SAMPLE RECEIPT	Leng Blank:	Yes No Wet Ice:	(Yes) No	.0)				
Samples Received Intact:	(Yes) No	nometer	8					
Cooler Custody Seals:	Yes No NA	Correction Factor:	نو	_				
Sample Custody Seals:	Yes No NIA	Temperature Reading:	(e . o)	S (E	Ť	· · · ·	1	Ļ.
Total Containers:		Corrected Temperature:	6.0	IDE		8021	-	
Sample Identification	Matrix	Date Time Sampled Sampled	Depth Grab/ #	# of Cont CHLOR	TPH (8	BTEX (
SW05	S	12.6.22 10:40	0-3' Comp	×	×	×		
				+				- 1
				\	1	1		
		,	1	-				, ,
		2.6.4						
	Colores +							
					_	T		
Total 200.7 / 6010	010 200.8 / 6020:	8RCRA 13	13PPM Texas 11	Al Sb /	As Ba	ВеВ	S	Ca
Circle Method(s) and	Met		0		As Ba	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	ဥ	Cr C
Notice: Signature of this do	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of test 00 will be anoticed to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	amples constitutes a valid samples and shall not as	d purchase order from c sume any responsibility charge of \$5 for each s.	ient comp	any to El	urofins X expenses	s inco), its al
Relinquished by: (Signature)	/: (Signature)	Receiyed by: (Signature)	ature)	Dat	Date/Time	0	70	Relinquished by:
Clour	(1)	0 (1)		D.0.0	نه لا	160	2	!
(,						4 0	
							-	

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3592-1

SDG Number: 03A1987053

Login Number: 3592 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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3592-1 SDG Number: 03A1987053

List Source: Eurofins Midland

Login Number: 3592 List Number: 2 List Creation: 12/08/22 11:44 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").

ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team Ensolum 601 N. Marienfeld St. Suite 400

Midland, Texas 79701

Generated 12/19/2022 4:39:11 PM

JOB DESCRIPTION

EP USA 3 SDG NUMBER 03A1987053

JOB NUMBER

890-3593-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

Authorization

Generated 12/19/2022 4:39:11 PM

Authorized for release by Jessica Kramer, Project Manager <u>Jessica.Kramer@et.eurofinsus.com</u> (432)704-5440 2

3

4

<u>ر</u>

7

8

1 0

13

Client: Ensolum
Project/Site: EP USA 3
Laboratory Job ID: 890-3593-1
SDG: 03A1987053

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	7
QC Sample Results	8
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receipt Checklists	19

Definitions/Glossary

Job ID: 890-3593-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

Qualifiers

GC VOA

Qualifier **Qualifier Description**

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

GC Semi VOA

Qualifier **Qualifier Description**

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

HPLC/IC

Qualifier **Qualifier Description**

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

Glossary

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

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

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

DFR Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

Decision Level Concentration (Radiochemistry) DLC

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

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

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

NC Not Calculated

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

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

PRES Presumptive

QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Eurofins Carlsbad

Case Narrative

 Client: Ensolum
 Job ID: 890-3593-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Job ID: 890-3593-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3593-1

Receipt

The sample was received on 12/6/2022 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.6°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-41938 and analytical batch 880-41993 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-41374 and analytical batch 880-41317 was outside the upper control limits.

Method 8015MOD_NM: The method blank for preparation batch 880-41374 and analytical batch 880-41317 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.

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 880-41295 and 880-41295 and analytical batch 880-41539 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

3

5

7

_

10

10

13

Matrix: Solid

Lab Sample ID: 890-3593-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-3593-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Client Sample ID: SW04

Date Collected: 12/06/22 10:30 Date Received: 12/06/22 16:20

Sample Depth: 0 - 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/17/22 04:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/17/22 04:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/17/22 04:40	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/15/22 14:55	12/17/22 04:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/17/22 04:40	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/15/22 14:55	12/17/22 04:40	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	119		70 - 130				12/15/22 14:55	12/17/22 04:40	1
1,4-Difluorobenzene (Surr)	100		70 - 130				12/15/22 14:55	12/17/22 04:40	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/19/22 16:21	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/09/22 11:21	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/08/22 12:54	12/09/22 04:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/08/22 12:54	12/09/22 04:40	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/08/22 12:54	12/09/22 04:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130				12/08/22 12:54	12/09/22 04:40	1
o-Terphenyl -	125		70 - 130				12/08/22 12:54	12/09/22 04:40	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	graphy - So	oluble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	171		5.00		mg/Kg			12/14/22 16:47	1

Eurofins Carlsbad

Surrogate Summary

 Client: Ensolum
 Job ID: 890-3593-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-22323-A-21-E MS	Matrix Spike	89	100	
880-22323-A-21-F MSD	Matrix Spike Duplicate	106	94	
890-3593-1	SW04	119	100	
LCS 880-41938/1-A	Lab Control Sample	96	99	
LCSD 880-41938/2-A	Lab Control Sample Dup	90	97	
MB 880-41899/5-A	Method Blank	102	87	
MB 880-41938/5-A	Method Blank	92	93	

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

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3593-1	SW04	111	125	
890-3595-A-1-F MS	Matrix Spike	115	114	
890-3595-A-1-G MSD	Matrix Spike Duplicate	117	115	
LCS 880-41374/2-A	Lab Control Sample	86	96	
LCSD 880-41374/3-A	Lab Control Sample Dup	81	91	
MB 880-41374/1-A	Method Blank	94	145 S1+	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Carlsbad

Released to Imaging: 5/17/2023 8:58:09 AM

2

4

6

Ω

9

13

Client: Ensolum Job ID: 890-3593-1 SDG: 03A1987053 Project/Site: EP USA 3

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-41899/5-A

Matrix: Solid Analysis Batch: 41993

Analyte

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41899

							Fieb Date	1. 41033
MB	MB							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.00200	U	0.00200		mg/Kg		12/15/22 10:18	12/16/22 10:53	1
0.00200	U	0.00200		mg/Kg		12/15/22 10:18	12/16/22 10:53	1

Benzene < 0.00 Toluene < 0.00 Ethylbenzene <0.00200 U 0.00200 mg/Kg 12/15/22 10:18 12/16/22 10:53 <0.00400 U 0.00400 12/16/22 10:53 m-Xylene & p-Xylene mg/Kg 12/15/22 10:18 o-Xylene <0.00200 U 0.00200 mg/Kg 12/15/22 10:18 12/16/22 10:53 Xylenes, Total <0.00400 U 0.00400 mg/Kg 12/15/22 10:18 12/16/22 10:53

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepare	: d	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	12/15/22 1	0:18	12/16/22 10:53	1
1,4-Difluorobenzene (Surr)	87		70 - 130	12/15/22 1	0:18	12/16/22 10:53	1

Lab Sample ID: MB 880-41938/5-A

Matrix: Solid

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41938

Analysis Batch: 41993

мв мв

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/16/22 22:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/16/22 22:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/16/22 22:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/15/22 14:55	12/16/22 22:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/15/22 14:55	12/16/22 22:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/15/22 14:55	12/16/22 22:04	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	12/15/22 14:5	12/16/22 22:04	1
1,4-Difluorobenzene (Surr)	93		70 - 130	12/15/22 14:5	5 12/16/22 22:04	1

Lab Sample ID: LCS 880-41938/1-A

Matrix: Solid

Analysis Batch: 41993

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 41938

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09576		mg/Kg		96	70 - 130	
Toluene	0.100	0.08860		mg/Kg		89	70 - 130	
Ethylbenzene	0.100	0.08429		mg/Kg		84	70 - 130	
m-Xylene & p-Xylene	0.200	0.1814		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.09253		mg/Kg		93	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	96	70 _ 130
1.4-Difluorobenzene (Surr)	99	70 - 130

Lab Sample ID: LCSD 880-41938/2-A

Matrix: Solid

Analysis Batch: 41993

C	lient	Sample	ID:	Lab	Control	Sample	Dup

Prep Type: Total/NA

Prep Batch: 41938

	Бріке	LCSD LCSD				%Rec		RPD	
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.09194	mg/Kg		92	70 - 130	4	35	

Eurofins Carlsbad

QC Sample Results

Client: Ensolum Job ID: 890-3593-1 SDG: 03A1987053 Project/Site: EP USA 3

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

Lab Sample ID: LCSD 880-41938/2-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 41993 Prep Batch: 41938

		Spike	LCSD	LCSD				%Rec		RPD
A	nalyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
To	bluene	0.100	0.08473		mg/Kg		85	70 - 130	4	35
Et	thylbenzene	0.100	0.07875		mg/Kg		79	70 - 130	7	35
m	-Xylene & p-Xylene	0.200	0.1684		mg/Kg		84	70 - 130	7	35
0-	-Xylene	0.100	0.08556		mg/Kg		86	70 - 130	8	35
To Et m	oluene thylbenzene Xylene & p-Xylene	0.100 0.100 0.200	0.08473 0.07875 0.1684	Qualifier	mg/Kg mg/Kg mg/Kg	_ =	85 79 84	70 - 130 70 - 130 70 - 130	4 7 7 8	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-22323-A-21-E MS Client Sample ID: Matrix Spike

Matrix: Solid Prep Type: Total/NA Analysis Batch: 41993 Prep Batch: 41938

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F1	0.0998	0.06182	F1	mg/Kg		62	70 - 130	
Toluene	<0.00200	U F1	0.0998	0.05097	F1	mg/Kg		51	70 - 130	
Ethylbenzene	<0.00200	U F1	0.0998	0.04186	F1	mg/Kg		42	70 - 130	
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.08464	F1	mg/Kg		42	70 - 130	
o-Xylene	<0.00200	U F1	0.0998	0.04276	F1	mg/Kg		43	70 - 130	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 880-22323-A-21-F MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Total/NA Analysis Batch: 41993 Prep Batch: 41938

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U F1	0.0990	0.04526	F1	mg/Kg		46	70 - 130	31	35
Toluene	<0.00200	U F1	0.0990	0.04195	F1	mg/Kg		42	70 - 130	19	35
Ethylbenzene	<0.00200	U F1	0.0990	0.04018	F1	mg/Kg		41	70 - 130	4	35
m-Xylene & p-Xylene	<0.00401	U F1	0.198	0.08291	F1	mg/Kg		42	70 - 130	2	35
o-Xylene	<0.00200	U F1	0.0990	0.04209	F1	mg/Kg		43	70 - 130	2	35

	MISD	MISD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

MSD MSD

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

Lab Sample ID: MB 880-41374/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 41317 мв мв Result Qualifier MDL Unit Prepared

<50.0 U 50.0 mg/Kg 12/08/22 12:54 12/08/22 20:36 Gasoline Range Organics (GRO)-C6-C10

Eurofins Carlsbad

Prep Batch: 41374

Job ID: 890-3593-1

Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

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

Client Sample ID: Method Blank Lab Sample ID: MB 880-41374/1-A **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 41317 Prep Batch: 41374

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/08/22 12:54	12/08/22 20:36	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/08/22 12:54	12/08/22 20:36	1
	МВ	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				12/08/22 12:54	12/08/22 20:36	1
o-Ternhenyl	145	S1+	70 130				12/08/22 12:54	12/08/22 20:36	1

Lab Sample ID: LCS 880-41374/2-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 41317 Prep Batch: 41374 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 777.3 78 70 - 130 mg/Kg (GRO)-C6-C10 1000 902.1 Diesel Range Organics (Over mg/Kg 90 70 - 130 C10-C28) LCS LCS Qualifier Limits Surrogate %Recovery 1-Chlorooctane 70 - 130 86

o-Terphenyl 96 70 - 130 Lab Sample ID: LCSD 880-41374/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid**

Analysis Batch: 41317 Prep Batch: 41374 Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier %Rec Limits RPD Limit Unit D Gasoline Range Organics 1000 756.0 76 70 - 130 3 20 mg/Kg (GRO)-C6-C10

876.3

mg/Kg

88

70 - 130

1000

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 81 70 - 130 o-Terphenyl 91 70 - 130

Lab Sample ID: 890-3595-A-1-F MS Client Sample ID: Matrix Spike **Matrix: Solid**

Analysis Batch: 41317 Prep Batch: 41374

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1034		mg/Kg		99	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	999	965.1		mg/Kg		97	70 - 130	

C10-C28)			
	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	114		70 - 130

Eurofins Carlsbad

Diesel Range Organics (Over

C10-C28)

20

3

Prep Type: Total/NA

Prep Type: Total/NA

Client: Ensolum Job ID: 890-3593-1 Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: 890-3595-A-1-G MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 41317

Prep Type: Total/NA Prep Batch: 41374

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<50.0	U	997	1036		mg/Kg		100	70 - 130	0	20
(GRO)-C6-C10 Diesel Range Organics (Over	<50.0	U	997	972.3		mg/Kg		98	70 - 130	1	20

C10-C28)

MSD MSD %Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 117 o-Terphenyl 115 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41295/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 41539

мв мв

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			12/14/22 13:18	1

Lab Sample ID: LCS 880-41295/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 41539

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	229.6		mg/Kg		92	90 - 110	

Lab Sample ID: LCSD 880-41295/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 41539

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	228.6		mg/Kg	_	91	90 - 110	0	20	

Lab Sample ID: 820-6683-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 41539

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	141	F1	250	344 6	F1	ma/Ka		81	90 _ 110	

Lab Sample ID: 820-6683-A-1-C MSD

Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 41539

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	141	F1	250	360.2	F1	mg/Kg		88	90 - 110	4	20

Eurofins Carlsbad

QC Association Summary

 Client: Ensolum
 Job ID: 890-3593-1

 Project/Site: EP USA 3
 SDG: 03A1987053

GC VOA

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-41899/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 41938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3593-1	SW04	Total/NA	Solid	5035	
MB 880-41938/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-41938/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-41938/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-22323-A-21-E MS	Matrix Spike	Total/NA	Solid	5035	
880-22323-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 41993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3593-1	SW04	Total/NA	Solid	8021B	41938
MB 880-41899/5-A	Method Blank	Total/NA	Solid	8021B	41899
MB 880-41938/5-A	Method Blank	Total/NA	Solid	8021B	41938
LCS 880-41938/1-A	Lab Control Sample	Total/NA	Solid	8021B	41938
LCSD 880-41938/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	41938
880-22323-A-21-E MS	Matrix Spike	Total/NA	Solid	8021B	41938
880-22323-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	41938

Analysis Batch: 42244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3593-1	SW04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 41317

Lab Sample ID 890-3593-1	Client Sample ID SW04	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 41374
MB 880-41374/1-A	Method Blank	Total/NA	Solid	8015B NM	41374
LCS 880-41374/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41374
LCSD 880-41374/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41374
890-3595-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	41374
890-3595-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	41374

Prep Batch: 41374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3593-1	SW04	Total/NA	Solid	8015NM Prep	
MB 880-41374/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41374/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41374/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3595-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3595-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 41451

Released to Imaging: 5/17/2023 8:58:09 AM

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3593-1	SW04	Total/NA	Solid	8015 NM	

Eurofins Carlsbad

6

2

<u>၂</u>

<u>ی</u>

8

J 6

13

QC Association Summary

 Client: Ensolum
 Job ID: 890-3593-1

 Project/Site: EP USA 3
 SDG: 03A1987053

HPLC/IC

Leach Batch: 41295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3593-1	SW04	Soluble	Solid	DI Leach	
MB 880-41295/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41295/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41295/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
820-6683-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
820-6683-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 41539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3593-1	SW04	Soluble	Solid	300.0	41295
MB 880-41295/1-A	Method Blank	Soluble	Solid	300.0	41295
LCS 880-41295/2-A	Lab Control Sample	Soluble	Solid	300.0	41295
LCSD 880-41295/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41295
820-6683-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	41295
820-6683-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	41295

Eurofins Carlsbad

Released to Imaging: 5/17/2023 8:58:09 AM

2

5

0

10

11

13

Client: Ensolum Job ID: 890-3593-1
Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: SW04 Lab Sample ID: 890-3593-1

Date Collected: 12/06/22 10:30 Matrix: Solid
Date Received: 12/06/22 16:20

	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	41938	12/15/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	41993	12/17/22 04:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42244	12/19/22 16:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			41451	12/09/22 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	41374	12/08/22 12:54	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41317	12/09/22 04:40	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	41295	12/07/22 15:12	KS	EET MID
Soluble	Analysis	300.0		1			41539	12/14/22 16:47	СН	EET MID

Laboratory References:

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

Eurofins Carlsbad

1

3

5

9

11

12

Accreditation/Certification Summary

Client: Ensolum
Project/Site: EP USA 3
SDG: 03A1987053

Laboratory: Eurofins Midland

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

AuthorityProgramTexasNELAP		ogram	Identification Number	Expiration Date
		T104704400-22-24	06-30-23	
The following englytes	and the street and the state of a contract that			
the agency does not of	• '	it the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes for
,	• '	t the laboratory is not certifi Matrix	ed by the governing authority. This list ma	ay include analytes for
the agency does not of	fer certification.	•	, , ,	ay include analytes for

6

0

10

13

Method Summary

 Client: Ensolum
 Job ID: 890-3593-1

 Project/Site: EP USA 3
 SDG: 03A1987053

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

2

5

7

_

10

13

Sample Summary

Client: Ensolum

Project/Site: EP USA 3

Job ID: 890-3593-1

SDG: 03A1987053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3593-1	SW04	Solid	12/06/22 10:30	12/06/22 16:20	0 - 3

Circle Method(s) and Metal(s)

Relinquished by: (Signature)

tens

E

12-6-22 16-30

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date: 08/25/2020 Rev 2020.2

Received by: (Signature)

eurofins

Environment Testing

Phone:

City, State ZIP: Address: Company Name: Project Manager:

SAMPLE RECEIPT

Sample Custody Seals: Cooler Custody Seals: Samples Received Intact:

otal Containers:

Sampler's Name:

Project Location: Project Number: Project Name:

Chain of Custody

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

Work Order No:

roject Manager:	Ben Belill		Bill to: (if different)	Jim Raley	Work Orc	Work Order Comments
omnany Name:	Ensolum		Company Name:	WPX	Program: UST/PST PRP B	PRP∏ Brownfields
ddress:	3122 National Parks HWY		Address:	5315 Buena Vista Dr.	State of Project:	
ity, State ZIP:	Carlsbad, NM 88220		City, State ZIP:	Carlsbad, NM 88220	Reporting: Level II Level III PST/UST TRRP	PST/UST TRRP Level IV
hone:	989-854-0852	Email	BBelill@Ensolum	Email: BBelill@Ensolum.com. jim.raley@dvn.com	Deliverables: EDD	ADaPT Other:
roject Name:	EP USA 3	Turi	Turn Around	ANALYSIS F	REQUEST	Preservative Codes
roject Number:	03A1987053	✓ Routine	Rush Code			None: NO DI Water: H ₂ O
roject Location:	Eddy County, NM	Due Date:	5 Day TAT			<u>o</u>
ampler's Name:	Gilbert Moreno		TAT starts the day received by			
C#:	1061155101	the lab, if re	L			H ₂ S0 ₄ : H ₂ NaOH: Na
AMPLE RECEIPT	Temp Blank:	Yes No Wet Ice:	No nete	0.0)		H ₃ PO ₄ : HP
amples Received Intact:	(es) No	Thermometer ID:	Earman	300		NaHSO ₄ : NABIS
ooler Custody Seals:	Yes No MIA	Correction Factor:		IPA:		Na ₂ S ₂ O ₃ : NaSO ₃
ample Custody Seals:	Yes No NIA	Temperature Reading:	6.0	1		Zn Acetate+NaOH: Zn
otal Containers:	Co	Corrected Temperature:	6.0	015)	ain of Custody	NaOH+ASCORDIC ACID: SAPC
Sample Identification	Matrix	Date Time Sampled Sampled	Depth Grab/ # of Comp Cont	CHLOR		Sample Comments
SW04	S	12.6.22 10:30	0-3' Comp 1	× ×		
						Incident Numbers
						NAB1622531873
	>	<u>, , , , , , , , , , , , , , , , , , , </u>				
		12.6				
	- Ching					
Total 200.7 / 6010	010 200.8 / 6020:	8RCRA 13	13PPM Texas 11 /	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe	Pb Mg Mn Mo Ni K Se Ag SiO ₂	₂ Na Sr Tl Sn U V Zn
rcle Method(s) a	Иet		PLP 6010: 8RCR	Ba Be C	TI U	Hg: 1631 / 245.1 / 7470 / 7471
tice: Signature of this	document and relinquishment of s	amples constitutes a valid	purchase order from cli	tice: 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	ctors. It assigns standard terms and condition	is
service. Eurofins Xenc Eurofins Xenco. A min	co will be liable only for the cost of himum charge of \$85.00 will be app	samples and shall not as lied to each project and a	sume any responsibility charge of \$5 for each sa	service. Eurofins Xenco will be liable only for samples as all and assume any responsibility for any losses or expenses incurred by the client if the cost of samples and sall not assume any responsibility for any losses or expenses incurred by the client if the increase are not increased to any the client in the cost of samples and and a returne any responsibility for any losses or expenses incurred by the client if the order that the cost of samples and and a returne any responsibility for any losses or expenses incurred by the client if the order that the cost of samples and and a returne any responsibility for any losses or expenses incurred by the client if the order that the cost of samples and and a returne any responsibility for any losses or expenses incurred by the client if the order that the cost of samples are described by the client in the cost of samples are described by the client in the cost of samples are described by the client in the cost of samples are described by the client in the cost of samples are described by the client in the cost of samples are described by the client in the cost of samples are described by the client in the cost of samples are described by the client in the cost of samples are described by the client in the cost of samples are described by the client in the cost of samples are described by the client in the cost of samples are described by the cost	ses are que to circumstances beyond including the con-	iated.
			Street Section 25	ble applitted to Laterille series and tree art.	terms will be efflorced unless breatoners	

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3593-1 SDG Number: 03A1987053

Login Number: 3593 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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

202

3

4

6

8

10

4.0

13

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3593-1 SDG Number: 03A1987053

Login Number: 3593
List Source: Eurofins Midland
List Number: 2
List Creation: 12/08/22 11:44 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	

4

3

4

5

9

11

13

14

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team Ensolum 601 N. Marienfeld St. Suite 400

Midland, Texas 79701

Generated 12/19/2022 4:39:40 PM

JOB DESCRIPTION

EP USA 3 SDG NUMBER 03A1987053

JOB NUMBER

890-3594-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

Authorization

Generated 12/19/2022 4:39:40 PM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Page 2 of 20

Client: Ensolum
Project/Site: EP USA 3
Laboratory Job ID: 890-3594-1
SDG: 03A1987053

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	7
QC Sample Results	8
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receipt Checklists	19

2

3

4

6

8

10

40

13

Definitions/Glossary

Job ID: 890-3594-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

Qualifiers

GC VOA

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

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

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

HPLC/IC

Qualifier **Qualifier Description**

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

Glossary

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

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

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

DFR Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

Decision Level Concentration (Radiochemistry) DLC

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

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit **PRES** Presumptive

QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Eurofins Carlsbad

Case Narrative

 Client: Ensolum
 Job ID: 890-3594-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Job ID: 890-3594-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3594-1

Receipt

The sample was received on 12/6/2022 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.6°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-41938 and analytical batch 880-41993 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-41374 and analytical batch 880-41317 was outside the upper control limits.

Method 8015MOD_NM: The method blank for preparation batch 880-41374 and analytical batch 880-41317 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.

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 880-41295 and 880-41295 and analytical batch 880-41539 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

3

4

5

0

0

9

11

1

14

Client Sample Results

Client: Ensolum Job ID: 890-3594-1 Project/Site: EP USA 3 SDG: 03A1987053

Client Sample ID: SW06 Lab Sample ID: 890-3594-1 Date Collected: 12/06/22 10:50

Matrix: Solid

Date Received: 12/06/22 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/15/22 14:55	12/17/22 05:01	1
Toluene	< 0.00199	U	0.00199		mg/Kg		12/15/22 14:55	12/17/22 05:01	1
Ethylbenzene	< 0.00199	U	0.00199		mg/Kg		12/15/22 14:55	12/17/22 05:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/15/22 14:55	12/17/22 05:01	1
o-Xylene	< 0.00199	U	0.00199		mg/Kg		12/15/22 14:55	12/17/22 05:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/15/22 14:55	12/17/22 05:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	119		70 - 130				12/15/22 14:55	12/17/22 05:01	1
1,4-Difluorobenzene (Surr)	100		70 - 130				12/15/22 14:55	12/17/22 05:01	1
Method: TAL SOP Total BTEX - 1	otal BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/19/22 16:21	1
Method: SW846 8015 NM - Diese Analyte	•	Qualifier	GC) RL	MDL	Unit	D	Prepared	Analyzed	5.1.5
							ricparca	Allalyzeu	DII Fac
Total TPH	<50.0	U	50.0		mg/Kg	_ <u>-</u>	Tropurcu	12/09/22 11:21	
.					mg/Kg	=			
Method: SW846 8015B NM - Dies	sel Range Orga			MDL	mg/Kg		Prepared		1
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	sel Range Orga	nics (DRO) Qualifier	(GC)	MDL				12/09/22 11:21	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	sel Range Orga Result	nics (DRO) Qualifier	(GC)	MDL	Unit		Prepared	12/09/22 11:21 Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	sel Range Orga Result <50.0	nics (DRO) Qualifier U	(GC) RL 50.0	MDL	Unit mg/Kg		Prepared 12/08/22 12:54	12/09/22 11:21 Analyzed 12/09/22 05:00	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	sel Range Orga Result <50.0	nics (DRO) Qualifier U	(GC) RL 50.0	MDL	Unit mg/Kg mg/Kg		Prepared 12/08/22 12:54 12/08/22 12:54	12/09/22 11:21 Analyzed 12/09/22 05:00 12/09/22 05:00	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	sel Range Orga Result <50.0 <50.0	nics (DRO) Qualifier U	(GC) RL 50.0 50.0 50.0	MDL	Unit mg/Kg mg/Kg		Prepared 12/08/22 12:54 12/08/22 12:54 12/08/22 12:54	12/09/22 11:21 Analyzed 12/09/22 05:00 12/09/22 05:00 12/09/22 05:00	Dil Face
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0 <50.0 <50.0 %Recovery	nics (DRO) Qualifier U	(GC) RL 50.0 50.0 50.0 Limits	MDL	Unit mg/Kg mg/Kg		Prepared 12/08/22 12:54 12/08/22 12:54 12/08/22 12:54 Prepared	12/09/22 11:21 Analyzed 12/09/22 05:00 12/09/22 05:00 12/09/22 05:00 Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	U Qualifier U Qualifier	(GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	MDL	Unit mg/Kg mg/Kg		Prepared 12/08/22 12:54 12/08/22 12:54 12/08/22 12:54 Prepared 12/08/22 12:54	Analyzed 12/09/22 05:00 12/09/22 05:00 12/09/22 05:00 Analyzed 12/09/22 05:00	Dil Face
Method: SW846 8015B NM - Dies 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	U Qualifier U Qualifier	(GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130		Unit mg/Kg mg/Kg		Prepared 12/08/22 12:54 12/08/22 12:54 12/08/22 12:54 Prepared 12/08/22 12:54	Analyzed 12/09/22 05:00 12/09/22 05:00 12/09/22 05:00 Analyzed 12/09/22 05:00	Dil Face

Surrogate Summary

Client: Ensolum Job ID: 890-3594-1 Project/Site: EP USA 3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	Percent Surrogate Recovery (Acceptance Limits)
I als Oamania ID	Olicut Occupita ID			
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-22323-A-21-E MS	Matrix Spike	89	100	
880-22323-A-21-F MSD	Matrix Spike Duplicate	106	94	
890-3594-1	SW06	119	100	
LCS 880-41938/1-A	Lab Control Sample	96	99	
LCSD 880-41938/2-A	Lab Control Sample Dup	90	97	
MB 880-41899/5-A	Method Blank	102	87	
MB 880-41938/5-A	Method Blank	92	93	

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

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

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

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3594-1	SW06	116	127	
890-3595-A-1-F MS	Matrix Spike	115	114	
890-3595-A-1-G MSD	Matrix Spike Duplicate	117	115	
LCS 880-41374/2-A	Lab Control Sample	86	96	
LCSD 880-41374/3-A	Lab Control Sample Dup	81	91	
MB 880-41374/1-A	Method Blank	94	145 S1+	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3594-1 Project/Site: EP USA 3 SDG: 03A1987053

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-41899/5-A

Matrix: Solid

Analysis Batch: 41993

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

Prep Batch: 41899

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/15/22 10:18	12/16/22 10:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/15/22 10:18	12/16/22 10:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/15/22 10:18	12/16/22 10:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/15/22 10:18	12/16/22 10:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/15/22 10:18	12/16/22 10:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/15/22 10:18	12/16/22 10:53	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Pi	repared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	12/1	5/22 10:18	12/16/22 10:53	1
1,4-Difluorobenzene (Surr)	87		70 - 130	12/1	5/22 10:18	12/16/22 10:53	1

Lab Sample ID: MB 880-41938/5-A **Matrix: Solid**

Analysis Batch: 41993 MR MR Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 41938

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Benzene <0.00200 U 0.00200 mg/Kg 12/15/22 14:55 12/16/22 22:04 Toluene <0.00200 U 0.00200 mg/Kg 12/15/22 14:55 12/16/22 22:04 Ethylbenzene <0.00200 U 0.00200 mg/Kg 12/15/22 14:55 12/16/22 22:04 12/16/22 22:04 m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg 12/15/22 14:55 <0.00200 U 12/16/22 22:04 o-Xylene 0.00200 mg/Kg 12/15/22 14:55 12/15/22 14:55 Xylenes, Total <0.00400 U 0.00400 12/16/22 22:04 mg/Kg

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	12/15/22 14:5	12/16/22 22:04	1
1,4-Difluorobenzene (Surr)	93		70 - 130	12/15/22 14:5	5 12/16/22 22:04	1

Lab Sample ID: LCS 880-41938/1-A

Matrix: Solid

Analysis Batch: 41993

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

Prep Batch: 41938

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09576		mg/Kg		96	70 - 130	
Toluene	0.100	0.08860		mg/Kg		89	70 - 130	
Ethylbenzene	0.100	0.08429		mg/Kg		84	70 - 130	
m-Xylene & p-Xylene	0.200	0.1814		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.09253		mg/Kg		93	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	96	70 - 130
1.4-Difluorobenzene (Surr)	99	70 - 130

Lab Sample ID: LCSD 880-41938/2-A

Matrix: Solid

Analysis Batch: 41993

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 41938

LCSD LCSD RPD Spike %Rec Result Qualifier Analyte Added Unit %Rec Limits RPD Limit Benzene 0.100 0.09194 mg/Kg 92 70 - 130

QC Sample Results

Client: Ensolum Job ID: 890-3594-1 Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: LCSD 880-41938/2-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 41993 Prep Batch: 41938

		Spike	LCSD	LCSD				%Rec		RPD
A	nalyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
To	bluene	0.100	0.08473		mg/Kg		85	70 - 130	4	35
Et	thylbenzene	0.100	0.07875		mg/Kg		79	70 - 130	7	35
m	-Xylene & p-Xylene	0.200	0.1684		mg/Kg		84	70 - 130	7	35
0-	-Xylene	0.100	0.08556		mg/Kg		86	70 - 130	8	35
To Et m	oluene thylbenzene Xylene & p-Xylene	0.100 0.100 0.200	0.08473 0.07875 0.1684	Qualifier	mg/Kg mg/Kg mg/Kg	_ =	85 79 84	70 - 130 70 - 130 70 - 130	4 7 7 8	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-22323-A-21-E MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 41993 Prep Batch: 41938

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F1	0.0998	0.06182	F1	mg/Kg		62	70 - 130	
Toluene	<0.00200	U F1	0.0998	0.05097	F1	mg/Kg		51	70 - 130	
Ethylbenzene	<0.00200	U F1	0.0998	0.04186	F1	mg/Kg		42	70 - 130	
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.08464	F1	mg/Kg		42	70 - 130	
o-Xylene	<0.00200	U F1	0.0998	0.04276	F1	mg/Kg		43	70 - 130	

MS MS Surrogate Qualifier %Recovery Limits 70 - 130 4-Bromofluorobenzene (Surr) 89 1,4-Difluorobenzene (Surr) 100 70 - 130

Lab Sample ID: 880-22323-A-21-F MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA Analysis Batch: 41993 Prep Batch: 41938

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U F1	0.0990	0.04526	F1	mg/Kg		46	70 - 130	31	35
Toluene	<0.00200	U F1	0.0990	0.04195	F1	mg/Kg		42	70 - 130	19	35
Ethylbenzene	<0.00200	U F1	0.0990	0.04018	F1	mg/Kg		41	70 - 130	4	35
m-Xylene & p-Xylene	<0.00401	U F1	0.198	0.08291	F1	mg/Kg		42	70 - 130	2	35
o-Xylene	<0.00200	U F1	0.0990	0.04209	F1	mg/Kg		43	70 - 130	2	35
m-Xylene & p-Xylene	<0.00401	U F1	0.198	0.08291	F1	mg/Kg		42	70 - 130	2 2	35

	MSD	MISD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

MSD MSD

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

Lab Sample ID: MB 880-41374/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 41317 Prep Batch: 41374 мв мв

Result Qualifier MDL Unit Prepared <50.0 U 50.0 12/08/22 12:54 12/08/22 20:36 Gasoline Range Organics mg/Kg (GRO)-C6-C10

Client: Ensolum Job ID: 890-3594-1 SDG: 03A1987053 Project/Site: EP USA 3

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

Lab Sample ID: MB 880-41374/1-A

Lab Sample ID: LCS 880-41374/2-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 41317

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41374

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		12/08/22 12:54	12/08/22 20:36	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/08/22 12:54	12/08/22 20:36	1

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130	12/08/22 12:54	12/08/22 20:36	1
o-Terphenyl	145	S1+	70 - 130	12/08/22 12:54	12/08/22 20:36	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41374

Analysis Batch: 41317 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 777.3 mg/Kg 78 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 902.1 70 - 130 mg/Kg 90 C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: LCSD 880-41374/3-A

Matrix: Solid

Analysis Batch: 41317

Client	Sample	ID: L	.ab	Contr	ol :	San	nple	Dup
				D	-		T - 4 -	LANDA

Prep Type: Total/NA

Prep Batch: 41374

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	756.0		mg/Kg		76	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	876.3		mg/Kg		88	70 - 130	3	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 890-3595-A-1-F MS

Matrix: Solid

Analysis Batch: 41317

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 41374

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1034		mg/Kg		99	70 - 130	_
Diesel Range Organics (Over	<50.0	U	999	965.1		mg/Kg		97	70 - 130	

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	114		70 - 130

Job ID: 890-3594-1 Client: Ensolum Project/Site: EP USA 3 SDG: 03A1987053

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

Lab Sample ID: 890-3595-A-1-G MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid**

Analysis Batch: 41317

Prep Type: Total/NA Prep Batch: 41374

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	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<50.0	U	997	1036		mg/Kg		100	70 - 130	0	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U	997	972.3		mg/Kg		98	70 - 130	1	20

C10-C28)

MSD MSD %Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 117 o-Terphenyl 115 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41295/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 41539

мв мв

	Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
l	Chloride	<5.00 U	5.00	mg/Kg			12/14/22 13:18	1

Lab Sample ID: LCS 880-41295/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble Matrix: Solid**

Analysis Batch: 41539

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	229.6		mg/Kg		92	90 - 110	

Lab Sample ID: LCSD 880-41295/3-A

Matrix: Solid

Analysis Batch: 41539

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	228.6		mg/Kg		91	90 - 110	0	20	

Lab Sample ID: 820-6683-A-1-B MS

Matrix: Solid

Analysis Batch: 41539

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	141	F1	250	344.6	F1	ma/Ka		81	90 - 110	

Lab Sample ID: 820-6683-A-1-C MSD

Matrix: Solid

Analysis Batch: 41539

•	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	141	F1	250	360.2	F1	mg/Kg		88	90 - 110	4	20

QC Association Summary

Client: Ensolum Job ID: 890-3594-1 Project/Site: EP USA 3 SDG: 03A1987053

GC VOA

Prep Batch: 41899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-41899/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 41938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3594-1	SW06	Total/NA	Solid	5035	
MB 880-41938/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-41938/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-41938/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-22323-A-21-E MS	Matrix Spike	Total/NA	Solid	5035	
880-22323-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 41993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3594-1	SW06	Total/NA	Solid	8021B	41938
MB 880-41899/5-A	Method Blank	Total/NA	Solid	8021B	41899
MB 880-41938/5-A	Method Blank	Total/NA	Solid	8021B	41938
LCS 880-41938/1-A	Lab Control Sample	Total/NA	Solid	8021B	41938
LCSD 880-41938/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	41938
880-22323-A-21-E MS	Matrix Spike	Total/NA	Solid	8021B	41938
880-22323-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	41938

Analysis Batch: 42245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3594-1	SW06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 41317

Lab Sample ID 890-3594-1	Client Sample ID SW06	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 41374
MB 880-41374/1-A	Method Blank	Total/NA	Solid	8015B NM	41374
LCS 880-41374/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41374
LCSD 880-41374/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41374
890-3595-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	41374
890-3595-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	41374

Prep Batch: 41374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3594-1	SW06	Total/NA	Solid	8015NM Prep	
MB 880-41374/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41374/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41374/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3595-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3595-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 41452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3594-1	SW06	Total/NA	Solid	8015 NM	

QC Association Summary

 Client: Ensolum
 Job ID: 890-3594-1

 Project/Site: EP USA 3
 SDG: 03A1987053

HPLC/IC

Leach Batch: 41295

Lab Sample ID 890-3594-1	Client Sample ID SW06	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-41295/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41295/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41295/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
820-6683-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
820-6683-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 41539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3594-1	SW06	Soluble	Solid	300.0	41295
MB 880-41295/1-A	Method Blank	Soluble	Solid	300.0	41295
LCS 880-41295/2-A	Lab Control Sample	Soluble	Solid	300.0	41295
LCSD 880-41295/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41295
820-6683-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	41295
820-6683-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	41295

4

5

8

40

11

Lab Chronicle

 Client: Ensolum
 Job ID: 890-3594-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Client Sample ID: SW06 Lab Sample ID: 890-3594-1

Date Collected: 12/06/22 10:50 Matrix: Solid
Date Received: 12/06/22 16:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	41938	12/15/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	41993	12/17/22 05:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42245	12/19/22 16:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			41452	12/09/22 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	41374	12/08/22 12:54	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41317	12/09/22 05:00	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	41295	12/07/22 15:12	KS	EET MID
Soluble	Analysis	300.0		1			41539	12/14/22 16:55	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

1

3

5

5

7

0

10

1 1

13

Н

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-3594-1
Project/Site: EP USA 3 SDG: 03A1987053

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 by	it the leberatory is not cortifi	ed by the governing authority. This list ma	arrimalizada amaliztaa farr
the agency does not of	• •	it the laboratory is not certifi	ed by the governing authority. This list his	ay include arialytes for
0 ,	• •	Matrix	Analyte	ay include analytes for
the agency does not of	fer certification.	•	, , ,	ay include analytes for

3

4

10

12

13

14

Method Summary

 Client: Ensolum
 Job ID: 890-3594-1

 Project/Site: EP USA 3
 SDG: 03A1987053

Method **Method Description** Protocol Laboratory 8021B Volatile Organic Compounds (GC) SW846 EET MID **Total BTEX Calculation** Total BTEX 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 SW846 **EET MID** Closed System Purge and Trap 8015NM Prep Microextraction SW846 EET MID

Protocol References:

DI Leach

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

Deionized Water Leaching Procedure

Laboratory References:

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

Eurofins Carlsbad

-

3

Λ

EET MID

ASTM

9

12

15

Ш

Sample Summary

Client: Ensolum

Project/Site: EP USA 3

Job ID: 890-3594-1

SDG: 03A1987053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-3594-1	SW06	Solid	12/06/22 10:50	12/06/22 16:20

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

Total 200.7 / 6010

200.8 / 6020:

8RCRA 13PPM

Texas 11 Al

dS

As Ва

TCLP / SPLP 6010: 8RCRA

Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U

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

Ag SiO₂ Na Sr TI Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471

itice: 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

eurofins

Xenco

Environment Testing

Sampler's Name: Project Location:

Eddy County, NM

Due Date:

✓ Routine

Rush 5 Day TAT

Turn Around

ANALYSIS REQUEST

HCL: HC H₂S0₄: H₂

Cool: Cool None: NO

MeOH: Me HNO3: HN

NaOH: Na

DI Water: H₂O

Preservative Codes

BBelill@Ensole

City, State ZIP: Address: Company Name:

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

03A1987053

EP USA 3

Gilbert Moreno

1061155101

Project Number: Project Name: City, State ZIP:

989-854-0852 Carlsbad, NM 88220 3122 National Parks HWY Company Name: Project Manager:

Ensolum

Ben Belil

Bill to: (if different)

Samples Received Intact: SAMPLE RECEIPT

es

No

Thermometer ID:

8

Z X

0

emp Blank:

Yes) No

Wet ice:

Yes

S

Parameters

imple Custody Seals: oler Custody Seals:

Yes Yes

S

Temperature Reading: Correction Factor:

Corrected Temperature:

6.0

CHLORIDES (EPA: 300.0)

890-3594 Chain of Custody

Sample identification **SW06**

Matrix

Sampled

Sampled

Depth

Grab/

TPH (8015)

BTEX (8021

Comp Comp

Cont # of

Date

Time

S

12.6.22

10:50

0-3

×

E

13 14

Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Houston, TX (281) 240-4200. Dallas, TX (214) 902-0300

Midland, TX (4	Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	Work Order No:	
EL Paso, TX	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296		
Hobbs, NM	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199		
		www.xenco.com Page of of	
different)	Jim Raley	Work Order Comments	
Name:	WPX	Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐	
	5315 Buena Vista Dr.	State of Project:	
e ZIP:	Carlsbad, NM 88220	Reporting: Level II Level III PST/UST TRRP Level IV	
Ensolum o	Ensolum com im ralev@dvn.com	Deliverables: EDD	

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Sala () () ()	200	12.6.33 1680	90		
			4		
	•		6		

NaOH+Ascorbic Acid: SAPC Zn Acetate+NaOH: Zn Na₂S₂O₃: NaSO₃ NaHSO₄: NABIS H3PO4: HP

Sample Comments

Incident Numbers NAB1622531873

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3594-1 SDG Number: 03A1987053

Login Number: 3594 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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

202

2

3

4

6

8

10

12

13

14

Login Sample Receipt Checklist

Client: Ensolum Job Nu

Job Number: 890-3594-1 SDG Number: 03A1987053

Login Number: 3594
List Source: Eurofins Midland
List Number: 2
List Creation: 12/08/22 11:44 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	

1

_

4

6

0

111

13

14

<6mm (1/4").



APPENDIX F

Email Correspondence

From: <u>Joseph Hernandez</u>
To: <u>Devon-Team</u>

Subject: FW: [EXTERNAL] WPX Site Sampling Activity Update (9/26-30)

Date: Monday, September 26, 2022 11:03:53 AM

Attachments: image001.png

image002.png image003.png image004.png

EH,

Save to folder please.



Joseph S. Hernandez Senior Geologist 281-702-2329 Ensolum, LLC

From: Nobui, Jennifer, EMNRD < Jennifer. Nobui@emnrd.nm.gov>

Sent: Monday, September 26, 2022 10:16 AM

To: Joseph Hernandez < jhernandez@ensolum.com>

Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD

<Robert.Hamlet@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>

Subject: FW: [EXTERNAL] WPX Site Sampling Activity Update (9/26-30)

[**EXTERNAL EMAIL**]

Joseph

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks.

Jennifer Nobui

From: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

Sent: Monday, September 26, 2022 8:07 AM

To: Bratcher, Michael, EMNRD < mike.bratcher@emnrd.nm.gov >; Nobui, Jennifer, EMNRD

<<u>Jennifer.Nobui@emnrd.nm.gov</u>>; Harimon, Jocelyn, EMNRD <<u>Jocelyn.Harimon@emnrd.nm.gov</u>>;

Hamlet, Robert, EMNRD < Robert, EMNRD | Robert, EM

<<u>Nelson.Velez@emnrd.nm.gov</u>>

Subject: Fw: [EXTERNAL] WPX Site Sampling Activity Update (9/26-30)

From: Joseph Hernandez < <u>jhernandez@ensolum.com</u>>

Sent: Sunday, September 25, 2022 4:57 PM

<<u>BLM_NM_CFO_Spill@blm.gov</u>>

Cc: Raley, Jim < <u>Jim.Raley@dvn.com</u>>; Devon-Team < <u>Devon-Team@ensolum.com</u>>

Subject: [EXTERNAL] WPX Site Sampling Activity Update (9/26-30)

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

Good afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between September 26-30, 2022:

Site: RDX 17-20 API: 30-015-41381

Incident Number: NAB1422341439, NAB1706053151

Site: EP USA 3

API: <u>30-015-24249</u>

Incident Number: nAB1622531873

Joseph S. Hernandez

Senior Geologist

281-702-2329

Ensolum, LLC

From: Nobui, Jennifer, EMNRD

To: <u>Erick Herrera</u>

Cc: <u>Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD</u>

Subject: FW: [EXTERNAL] WPX Site Sampling Activity Update (10/3-10/7)

Date: Monday, October 3, 2022 10:50:26 AM

Attachments: image001.png

image002.png image003.png image004.png

[**EXTERNAL EMAIL**]

Erick

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks,

Jennifer Nobui

From: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

Sent: Monday, October 3, 2022 8:15 AM

To: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>

Subject: Fw: [EXTERNAL] WPX Site Sampling Activity Update (10/3-10/7)

From: Erick Herrera < eherrera@ensolum.com > Sent: Friday, September 30, 2022 4:17 PM

To: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov >; 'CFO_Spill, BLM_NM'

<<u>BLM_NM_CFO_Spill@blm.gov</u>>

Cc: jim.raley@dvn.com <jim.raley@dvn.com>; Devon-Team <<u>Devon-Team@ensolum.com</u>>

Subject: [EXTERNAL] WPX Site Sampling Activity Update (10/3-10/7)

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

Good afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between October 3 – October 7, 2022:

Site Name: RDX 17-21 API: 30-015-41088

Incident Number: NAB1725454826

Site Name: EP USA 3 API: 30-015-24249

Incident Number: NAB1622531873



From: <u>Harimon, Jocelyn, EMNRD</u>

To: <u>Erick Herrera</u>

Cc: Bratcher, Michael, EMNRD

Subject: RE: WPX Site Sampling Activity Update (10/24-10/28)

Date: Friday, October 21, 2022 5:04:05 PM

Attachments: <u>image001.png</u>

image002.png image003.png image004.png

[**EXTERNAL EMAIL**]

Erick.

Thank you for the notification. Be aware that the relevant portion/portions of 19.15.29 NMAC requires notification two business days prior to obtaining confirmation samples. The same is required for liner inspections as well. You may request a variance from this requirement "upon a showing of good cause as determined by the division." A notification on Friday afternoon would allow for sampling or liner inspection the following Wednesday. Also, please include the OCD generated incident number on all notifications, and include a copy of all correspondence in the remediation proposal and/or closure report.

Since this notification requirement has largely been interpreted as meaning 48 hours, you may proceed on your schedule for this one, just be aware of the requirement going forward.

Thank you,

Jocelyn Harimon • Environmental Specialist

Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@state.nm.us

http://www.emnrd.nm.gov



From: Erick Herrera < <u>eherrera@ensolum.com</u>>

Sent: Friday, October 21, 2022 3:05 PM

To: Enviro, OCD, EMNRD < OCD.Enviro@emnrd.nm.gov>; 'CFO_Spill, BLM_NM'

<BLM NM CFO Spill@blm.gov>

Cc: Raley, Jim < <u>iim.raley@dvn.com</u>>; Devon-Team < <u>Devon-Team@ensolum.com</u>>

Subject: [EXTERNAL] WPX Site Sampling Activity Update (10/24-10/28)

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

links or opening attachments.

Good afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between October 24 – October 28, 2022:

Site Name: RDX Federal 17-21

API: 30-015-41088

Incident Number: NAB1725454826

Site Name: EP USA 3 API: 30-015-24249

Incident Number: NAB1622531873

Site Name: Electrolux 21 State Com #001

API: 30-025-35769

Incident Number: nTO1424150643

Thank you,



Erick Herrera

From: Erick Herrera

Sent: Wednesday, October 26, 2022 3:01 PM

To: OCD.Enviro@emnrd.nm.gov; 'CFO_Spill, BLM_NM'

Cc: Raley, Jim

Subject: WPX Site Sampling Activity Update (10/31 - 11/4)

Good afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between October 31 – November 4, 2022:

Site Name: RDX 9-1 API: 30-015-36211

Incident Number: nAB1728635377

Site Name: RDX 17-2 API: 30-015-36464

Incident Number: nAB1633449255

Site Name: LVP SWD #001

API: 30-015-42234

Incident Number: nAPP2135033453

Site Name: RDX Federal 21-44

API: 30-015-41193

Incident Number: nAPP2115533694

Site Name: RDU 54 API: 30-015-41975

Incident Number: nAB1722953239

Site Name: Electrolux 21 State Com #001

API: 30-025-35769

Incident Number: nTO1424150643

Site Name: EP USA 3 API: 30-015-24249

Incident Number: nAB1622531873

Thank you,



PLEASE NOTE OUR NEW CORPORATE ADDRESS:

Ensolum, LLC 8330 LBJ Freeway, Ste. B830 Dallas, TX 75243

Erick Herrera

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Sent: Wednesday, November 23, 2022 5:29 PM

To: Erick Herrera

Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD

Subject: RE: [EXTERNAL] WPX Site Sampling Activity Update (11/28 - 12/2)

[**EXTERNAL EMAIL**]

Please be aware that notification requirements are **two business days**, per rule. Please proceed on your schedule. Also, please include this, and all correspondence, in the closure report to insure inclusion in the project file.

Many thanks and happy holidays!

Jocelyn Harimon • Environmental Specialist

Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov

http://www.emnrd.nm.gov



From: Erick Herrera <eherrera@ensolum.com> Sent: Wednesday, November 23, 2022 3:32 PM

To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; 'CFO Spill, BLM NM' <bl rowspan="2">Spill@blm.gov>

Cc: Raley, Jim <jim.raley@dvn.com>; Devon-Team <Devon-Team@ensolum.com>

Subject: [EXTERNAL] WPX Site Sampling Activity Update (11/28 - 12/2)

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

Good afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between November 28 – December 2, 2022:

Site Name: RDX 16-4 API: 30-015-39750

Incident Number: nAPP2223636403

Site Name: EP USA 3 API: 30-015-24249

Incident Number: NAB1622531873

Site Name: MWJ Federal 1

API: 30-015-24262

Incident Number: nAB1503440420, nAB1524652333, and nAB1719940724

Thank you,



PLEASE NOTE OUR NEW CORPORATE ADDRESS:

Ensolum, LLC 8330 LBJ Freeway, Ste. B830 Dallas, TX 75243

Erick Herrera

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Sent: Wednesday, November 30, 2022 4:33 PM

To: Erick Herrera

Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD

Subject: RE: [EXTERNAL] WPX Site Sampling Activity Update (12/5- 12/9)

[**EXTERNAL EMAIL**]

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Jocelyn Harimon • Environmental Specialist

Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | <u>Jocelyn.Harimon@emnrd.nm.gov</u>

http://www.emnrd.nm.gov



From: Erick Herrera <eherrera@ensolum.com> Sent: Wednesday, November 30, 2022 3:27 PM

To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; 'CFO Spill, BLM NM' <bl rowspan="2">Spill, BLM NM'
Spill, BLM NM'

Cc: Raley, Jim <jim.raley@dvn.com>; Devon-Team <Devon-Team@ensolum.com>

Subject: [EXTERNAL] WPX Site Sampling Activity Update (12/5-12/9)

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

Good afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between December 5 – December 9, 2022:

Site Name: RDX 16-4 API: 30-015-39750

Incident Number: nAPP2223636403

Site Name: EP USA 3 API: 30-015-24249

Incident Number: NAB1622531873

Thank you,



PLEASE NOTE OUR NEW CORPORATE ADDRESS:

Ensolum, LLC 8330 LBJ Freeway, Ste. B830 Dallas, TX 75243

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 215897

CONDITIONS

Operator:	OGRID:
WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	215897
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By		Condition Date
amaxwell	None	5/17/2023