

February 3, 2023

**New Mexico Oil Conservation Division** New Mexico Energy, Minerals, and Natural Resources Department 1220 South St. Francis Drive Santa Fe, New Mexico 87505

### Re: Closure Request SEMU Eumont #117 Incident Number NAPP2231946665 Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Maverick Permian, LLC (Maverick), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities performed at the SEMU Eumont #117 (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of produced water and crude oil within the pasture area at the Site. Based on excavation activities and laboratory analytical results from the soil sampling events, Maverick is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2231946665.

### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit L, Section 24, Township 20 South, Range 37 East, in Lea County, New Mexico (32.5559572°, -103.2069571°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On November 5, 2022, a flowline leaked due to internal corrosion, resulting in the release of approximately 3.02 barrels (bbls) of produced water and 1.29 bbls of crude oil into the surrounding pasture. Released fluids were unable to be recovered. Maverick reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on November 15, 2022. The release was assigned Incident Number NAPP2231946665.

## SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Maverick Permian, LLC Closure Request SEMU Eumont #117

Depth to groundwater at the Site is estimated to be between 51 and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is the New Mexico Office of the State Engineer (NMOSE) well L-15389, located approximately 0.7 miles west of the Site The groundwater well has a reported depth to groundwater at 80 feet bgs and a unknown total depth. The second closet permitted groundwater well with depth to groundwater data is the United States Geological Survey (USGS) well 323358103123001 located 0.7 miles north of the Site. The groundwater well has a reported depth to groundwater greater than 100 feet bgs. Based on regional depth to water, NMOSE well was utilized as the more conservative standard. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a stream, located approximately 2.4 miles south of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet from a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

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

## INITIAL SITE ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On November 8, 2022, personnel were at the Site to complete Site assessment activities based on information provided on the Form C-141 and visible surface staining observed in the pasture release area. Two soil samples (SS01 and SS02) were collected within the release extent at a depth of 0.5 feet bgs. Additionally, four lateral delineation soil samples (SS03 through SS06) were collected around the release extent at a depth of 0.2 feet bgs to assess the lateral extent of the release.

The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach<sup>®</sup> chloride QuanTab<sup>®</sup> test strips. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.



Closure Request SEMU Eumont #117

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

Laboratory analytical results for soil sample SS02 indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement. Laboratory analytical results for soil sample SS01 indicated total BTEX and TPH concentrations exceeded the Site Closure Criteria and the reclamation requirement (applicable for TPH); thus, excavation activities appeared warranted to address impacted soil. Laboratory analytical results for soil samples SS03 through SS06, collected around the release extent, indicated concentrations of all COCs were compliant with the most stringent Table 1 Closure Criteria and successfully defined the lateral extent of the release.

Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

## **EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS**

Between December 22, 2022 and January 16, 2023, Ensolum personnel were onsite to oversee excavation activities based on surface staining and laboratory analytical results for soil sample SS01. Impacted soil was excavated from the release area as indicated by visible staining, field screening activities, and laboratory analytical results. Excavation activities were performed via track-mounted track hoe and transport vehicles. To direct excavation activities, soil was field screened for VOCs and chloride. The excavation was completed to a depth of 4.5 feet bgs. Photographic documentation is included in Appendix B.

Following removal of waste-containing soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS12 were collected from the floor of the excavation at a depth of 4 feet bgs. Composite soil samples SW01 through SW04 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

Laboratory analytical results for excavation floor samples FS08 through FS12 and excavation sidewall samples SW01 through SW04 indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement, where applicable.

Laboratory analytical results for FS01 and FS03 indicated TPH concentrations exceeded the Site Closure Criteria. Additional soil was removed in the vicinity of confirmation samples FS01 and FS03 and while excavation activities were occurring, additional soil was removed in in the vicinity of confirmation samples FS02, FS04, FS06, and FS07. Subsequent confirmation soil samples FS01A through FS04A, FS06A, and FS07A were collected at 4.5 feet bgs. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.



The excavation measured approximately 2,241 square feet in areal extent. A total of approximately 373 cubic yards of impacted soil was removed during the excavation activities. The soil was transported and properly disposed of at the R360 Disposal Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

## **CLOSURE REQUEST**

Assessment and excavation activities were conducted at the Site to address the November 5, 2022, release of produced water and crude oil. Laboratory analytical results for the excavation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement, where applicable. Based on the soil sample analytical results, no further remediation was required. Maverick will backfill the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. The disturbed pasture area will be re-seeded with an approved BLM seed mixture.

Excavation of impacted soil supported efforts to reclaim this Site following the November 2022 release. Depth to groundwater has been conservatively estimated to be between 51 feet and 100 feet bgs and no sensitive receptors were identified near the release extent. Maverick believes these remedial actions are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number NAPP2231946665. The Final C-141 is included in Appendix D.

If you have any questions or comments, please contact Ms. Kalei Jennings at (817) 683-2503 or kjennings@ensolum.com.

Sincerely, Ensolum, LLC

Hadlie Green Staff Geologist

cc: Bryce Wagoner, Maverick Permian, LLC Bureau of Land Management

### Appendices:

- Figure 1 Site Receptor Map
- Figure 2 Soil Sample Locations
- Figure 3 Excavation Soil Sample Locations
- Table 1Soil Sample Analytical Results
- Appendix A Referenced Well Records
- Appendix B Photographic Log
- Appendix C Laboratory Analytical Reports & Chain-of-Custody Documentation
- Appendix D Final C-141
- Appendix E NMOCD Notifications

Kalei Jennings Senior Scientist





FIGURES

.

Received by OCD: 2/2/2023 9:39:03 AM

### Page 6 of 244





#### Received by OCD: 2/2/2023 9:39:03 AM





## TABLES

•

## **ENSOLUM**

	TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS SEMU Eumont #117 Maverick Permian, LLC Lea County, New Mexico											
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)		
NMOCD Table 1	Closure Criteria (	(NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000		
		I		Preli	minary Soil Sa	mples						
SS01	11/08/2022	0.5	1.51	118	2,110	3,380	1,890	5,490	7,380	590*		
SS02	11/08/2022	0.5	<0.0996	0.864	<49.9	<49.9	<49.9	<49.9	<49.9	43.7*		
SS03	12/22/2022	0.2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	<4.97*		
SS04	12/22/2022	0.2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	<5.05*		
SS05	12/22/2022	0.2	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	<4.98*		
SS06	12/22/2022	0.2	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	<4.97*		
				Excava	tion Floor Soil	Samples						
FS01	12/29/2022	4	0.224	40.3	1,500	3,080	<250	4,580	4,580	287		
FS01A	01/10/2023	4.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	38.8		
FS02	12/29/2022	4	<0.0200	0.0645	<49.9	192	<49.9	192	192	23.1		
FS02A	01/10/2023	4.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	46.3		
FS03	12/29/2022	4	<0.0996	11.6	449	1,070	<50.0	1,519	1,520	893		
FS03A	01/10/2023	4.5	<0.00199	<0.00398	<50.0	62.1	<50.0	62.1	62.1	59.1		
FS04	12/29/2022	4	<0.0199	<0.0398	<49.9	111	<49.9	111	111	17.5		
FS04A	01/10/2023	4.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	42.6		
FS05	12/29/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	<4.95		
FS06	12/30/2022	4	<0.0399	<0.0798	<50.0	304	<50.0	304	304	10.4		
FS06A	01/16/2023	4.5	0.00298	0.0880	<50.0	<50.0	<50.0	<50.0	<50.0	49.0		
FS07	12/30/2022	4	<0.0398	<0.0797	<50.0	192	<50.0	192	192	118		
FS07A	01/16/2023	4.5	<0.00201	0.00854	<49.9	<49.9	<49.9	<49.9	<49.9	48.4		
FS08	12/30/2022	4	0.00215	0.00655	<49.9	81.9	<49.9	81.9	81.9	<4.97		
FS09	12/30/2022	4	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	<5.05		
FS10	12/30/2022	4	<0.00201	<0.00402	<50.0	60.6	<50.0	60.6	60.6	<4.99		
FS11	12/30/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	<5.01		
FS12	12/30/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	<5.00		

•

## E N S O L U M

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS SEMU Eumont #117 Maverick Permian, LLC Lea County, New Mexico											
Sample I.D.	Sample I.D.Sample DateSample Depth (feet bgs)Benzene (mg/kg)Total BTEX (mg/kg)TPH GRO (mg/kg)TPH ORO (mg/kg)GRO+DRO (mg/kg)Total TPH (mg/kg)Chloride (mg/kg)										
NMOCD Table 1 C	losure Criteria (	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000	
	Excavation Sidewall Soil Samples										
SW01	12/29/2022	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	8.45*	
SW02	12/29/2022	0 - 4	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	<5.01*	
SW03	12/30/2022	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	<5.02*	
SW04	12/30/2022	0 - 4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	5.91*	

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Gray text indicates soil sample removed during excavation activities

\* indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard for TPH in the top 4 feet is 100 mg/kg



## APPENDIX A

**Referenced Well Records** 

## USES 32335 8193 1222023 2.95.37 13.32130

Lea County, New Mexico Latitude 32°33'58", Longitude 103°12'30" NAD27 Land-surface elevation 3,544 feet above NAVD88 This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer. This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

						Page 13 of 244
		Out	tput formats			
Table of data	6					
Tab-separated	d data					
Graph of data						
Reselect perio	<u>od</u>					
\$	Referenced vertical \$ datum	O ≎ Status	Method of the surement the suremet surement the suremet	Measuring \$	Source of the so	Ø Water-level ≎ approval status
3468.48	NGVD29	1	Z			A
3469.61	NAVD88	1	z			A
		1	Z			A
3467.71	NGVD29	i	Z			A
3468,84	NAVD88	1	Z			A
		1	z			A
3465.53	NGVD29	P	Z			A
3466.66	NAVD88	P	z			A
		p	Z			A
3465.75	NGVD29	1	Z			Á.
3466.88	NAVD88	1	Z			A
		1	Z			A
3464.07	NGVD29	1	Z			Ą
3465.20	NAVD88	1	Z			A

Date \$	Time \$	Ø Water-level ≎ date-time accuracy	Ø Parameter \$ code	Water level, feet below land surface	Water level, feet above \$ specific vertical datum	Referenced vertical \$ datum	n o Status	Method of the surrement	Measuring agency
1954-04-02		D	62610		3468.48	NGVD29	1	Z	
1954-04-02		D	62611		3469.61	NAVD88	1	Z	
1954-04-02		D	72019	74.39			1	Z	2
1961-02-27		D	62610		3467.71	NGVD29	1	Z	
1961-02-27		D	62611		3468,84	NAVD88	1	Z	
1961-02-27		D	72019	75.16			1	Z	
1968-04-08		D	62610		3465.53	NGVD29	P	Z	
1968-04-08		D	62611		3465.66	NAVD88	P	Z	
1968-04-08		D	72019	77.34			P	Z	
1971-01-14		D	62610		3465.75	NGVD29	1	Z	
1971-01-14		D	62611		3465,88	NAVD88	1	Z	
1971-01-14		D	72019	77.12			1	Z	
1976-02-04		D	62610		3464.07	NGVD29	1	Z	
1976-02-04		D	62611		3465.20	NAVD88	1	Z	
1976-02-04		D	72019	78.80			1	Z	2
1981-02-10		D	62610		3463.20	NGVD29	1	Z	
1981-02-10		D	62611		3464.33	NAVD88	1	Z	
1981-02-10		D	72019	79.67			1	Z	2
1986-03-27		D	62610		3462.72	NGVD29	1	Z	3
1986-03-27		D	62611		3463.85	NAVD88	1	Z	
1986-03-27		D	72019	80.15			1	Z	
1991-02-01		D	62610		3462.54	NGVD29	1	Z	
Released to Imaging	g: 2/20/2023 2:06:44 1	PM D	62611		3463.67	NAVD88	1	Z	
1991-02-01	5	D	72019	80.33			1	Z	



## WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

NO	OSE POD NO. (WELL NO.) L-15389-POD1 WELL TAG ID NO.						OSE FILE NO( L-15389	S).				
OCATIC	WELL OWNER MAVRICK N		) AL RESOURCE	SLLC				PHONE (OPTI 928-241-180				
AND WELL LOCATION	WELL OWNER 1410 NW CC							CITY HOBBS		STATE NM	88240	ZIP
GENERAL AND	WELL LOCATION (FROM GPS)		TITUDE NGITUDE	DEGREES 32 -103	MINUTES 33 13	2	onds 5.88 N 1.88 W	* ACCURACY REQUIRED: ONE TE * DATUM REQUIRED: WGS 84		TH OF A SE	COND	
1. GENI	DESCRIPTION SEMU-EUM	RELATIN	NG WELL LOCATION	TO STREET AI	DDRESS AND COMM	ION LAND	MARKS – PLS	I SS (SECTION, TO	WNSHJIP, RANGE) WH	ERE AVAII	ABLE	
	LICENSE NO. WD-11	84	NAME OF LICENS		SSELL SOUTHE	ERLAND	)		NAME OF WELL DRI WEST TEXAS			VICE
	DRILLING STA 9/27/20		DRILLING ENDER 09/27/2022	D DEPTH OF	COMPLETED WELL 100	. (FT)	BORE HO	LE DEPTH (FT)	DEPTH WATER FIRS	ST ENCOUN	TERED (FT)	
z	COMPLETED V	VELL IS:	ARTESIAN	DRY I	HOLE 🗌 SHAL	LOW (UNC	CONFINED)		STATIC WATER LEV	VEL IN COM N/A	PLETED WE	LL (FT)
VIIO	DRILLING FLU	ID:	🖌 AIR	MUD	ADDI	TIVES – SP	PECIFY:					
RM	DRILLING MET	HOD:	ROTARY		MER 🗌 CABL	E TOOL	OTHE	R - SPECIFY:				
CASING INFORMATION	DEPTH (feet bgl) BORE HOLI FROM TO DIAM			NG MATERIAL A GRADE			ASING NECTION	CASING INSIDE DIAM.		G WALL KNESS	SLOT SIZE	
CASD			(inches)		de each casing strip ote sections of scre			TYPE ling diameter)	(inches)	(inches)		(inches)
ING & C				N	D CASING IN HO	DLE						
2. DRILLING &												
						_			OSE DII OCT	14 202	2 PM2:31	
		_		-								-
	DEPTH (fe	et bgl)	BORE HOLI		LIST ANNULAR	SEAL M	ATERIAL	AND	AMOUNT		METHO	
RIAL	FROM	то	DIAM. (inche	es) G	RAVEL PACK SL	ZE-RANG	GE BY INTE	ERVAL	(cubic feet)	_	PLACEM	1ENT
MATE			_	_		N/A						_
ANNULAR MATERIAL												
3. A				_								
FOR	OSE INTERN	AL USE						WR-2	0 WELL RECORD	& LOG (V	ersion 04/30	0/19)
	THE STATE OF THE STATE OF	538			POD	NO.	1	TRN				
LOC			7E. 23.	2.1.4	1		<	WELL TAG I	D NO		PAGE	1 OF 2

	DEPTH (1	feet bgl)		COLOR AN	D TYPE OF MATE	RIAL E	NCOUN	TERED -		WA	TER	ESTIMAT YIELD F	
	FROM	то	THICKNES (feet)	INCLUDE WATE	ER-BEARING CAV				~	BEA	RING? / NO)	WATER BEARIN ZONES (g	R- IG
	0	1			CALICHIE	PAD				Y	✔ N		
	1	20			SAND	)				Y	✔ N		
	20	21			LIMESTO	ONE				Y	✔ N		
	21	100	1		SAND	)				Y	🗸 N		
										Y	N	1	
-										Y	N		
WEI										Y	Ν		
5										Y	N		
										Y	N		
										Y	N		
										Y	N		
GEO										Y	Ν		
NKO										Y	Ν		
4. HYDROGEOLOGIC LOG OF WELL										Y	N		
4.										Y	N		
										Y	N		
										Y	N		
										Y	Ν		
										Y	N	11	
										Y	N		
	L									Y	N		
1	METHOD U		STIMATE YII	BAILER	G STRATA: THER – SPECIFY: I	ORY HO	DLE		TOTAL WELL Y		MATED D (gpm):	0.00	
NOISIA	WELL TES	T TEST	RESULTS - A	ATTACH A COPY OF DAT TIME, AND A TABLE SI	A COLLECTED D	URING	WELL						
0. LEDI; MUG DUFERVIDI								0	SE DIT C	)CT	14 202	2 pm2:31	
2. IEG	PRINT NAM			PERVISOR(S) THAT PRO	VIDED ONSITE S	JPERVI	SION O	F WELL CON	STRUCTI	ON (	OTHER T	HAN LICENS	SEE
0. DIGNALORE	RECORD O	F THE ABO	OVE DESCRIE	THAT TO THE BEST O BED WELL. I ALSO CERT LED WITH THE PERMIT I	TFY THAT THE W	ELL TA 30 DAYS	G. IF RI	EOUIRED, HA	S BEEN I	NST. F WI	ALLED A	ND THAT TI	ECT
	/	SIGNAT	TURE OF DRI	LLER / PRINT SIGNEE	NAME						DATE		-
FOI	R OSE INTER	NAL USE						WR-20 WE	LL RECO	RD &	LOG (Ve	ersion 04/30/2	2019
IL	E NO. L-	5389			POD NO.			TRN NO.	733	5:	84		
0	CATION 7	ns z	76 77	2.1.4			11/171 1	TAG ID NO.	-			PAGE 2 0	DE



## APPENDIX B

Photographic Log



Photograph 1

Date: December 29, 2022

Description: Photo of ongoing excavation activities, facing Southeast.



Description: View of final excavation activities, facing North.



APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

Received by OCD: 2/2/2023 9:39:03 AM



**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Hadlie Green Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 1/16/2023 10:28:05 AM Revision 1

## JOB DESCRIPTION

SEMU EUMONT #117 SDG NUMBER 03D2057041

## **JOB NUMBER**

890-3711-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

## **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

ly Taylor

Generated 1/16/2023 10:28:05 AM Revision 1

Authorized for release by Holly Taylor, Project Manager Holly.Taylor@et.eurofinsus.com Designee for 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

# **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

Qualifiers		3
GC VOA		5
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VO	Δ	
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		8
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	9
Glossary		10
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	40
DER	Duplicate Error Ratio (normalized absolute difference)	13
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

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

**Quality Control** QC

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)
- TNTC Too Numerous To Count

**Eurofins Carlsbad** 

Job ID: 890-3711-1

Page 22 of 244

## **Case Narrative**

Client: Ensolum Project/Site: SEMU EUMONT #117

## Job ID: 890-3711-1

### Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3711-1

#### Revision

The report being provided is a revision of the original report sent on 1/3/2023. The report (revision 1) is being revised to change the sample ID per Hadlie Green (email).

#### Receipt

The sample was received on 12/27/2022 1:31 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 was 1.2° C.

### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: SS06 (890-3711-1).

#### GC VOA

Method 8021B: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-42898 and analytical batch 880-42933. The associated laboratory control sample (LCS) met acceptance criteria.

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

#### GC Semi VOA

Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-42937/21), (CCV 880-42937/32) and (CCV 880-42937/5). Evidence of matrix interferences is not obvious.

Method 8015B NM: Surrogate recovery for the following sample was outside control limits: SS06 (890-3711-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015B NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-42928 and analytical batch 880-42937 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.

#### **General Chemistry**

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

#### **Organic Prep**

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

### VOA Prep

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

## **Client Sample Results**

Client: Ensolum Project/Site: SEMU EUMONT #117

### **Client Sample ID: SS06** Date Collected: 12/22/22 10:15 Date Received: 12/27/22 13:31 Sample Depth: 0.2

Chefit Sample ID. 5500										
Date Collected: 12/22/22 10:1	5			Matrix: So						
Date Received: 12/27/22 13:37	l									
Sample Depth: 0.2										
Method: SW846 8021B - Vola	atile Organic	Compound	ds (GC)							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Benzene	<0.00200	U	0.00200	ma/Ka		12/29/22 13:35	12/31/22 21:08	1		

<b>-</b>							
Benzene	<0.00200	U	0.00200	mg/Kg	12/29/22 13:35	12/31/22 21:08	1
Toluene	<0.00200	U	0.00200	mg/Kg	12/29/22 13:35	12/31/22 21:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg	12/29/22 13:35	12/31/22 21:08	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg	12/29/22 13:35	12/31/22 21:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg	12/29/22 13:35	12/31/22 21:08	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg	12/29/22 13:35	12/31/22 21:08	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130		12/29/22 13:35	12/31/22 21:08	1
1,4-Difluorobenzene (Surr)	107		70 - 130		12/29/22 13:35	12/31/22 21:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/03/23 09:47	1	

Method: SW846 8015 NM - Die	esel Range Organics (E	)RO) (GC)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<50.0 U	50.0	mg/Kg			01/03/23 10:37	1	

Method: SW846 8015B NM - I	Diesel Range	• Organics	(DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/30/22 08:23	12/30/22 23:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/30/22 08:23	12/30/22 23:24	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/30/22 08:23	12/30/22 23:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	40	S1-	70 - 130			12/30/22 08:23	12/30/22 23:24	1
o-Terphenyl	32	S1-	70 - 130			12/30/22 08:23	12/30/22 23:24	1
_o-Terphenyl  Method: MCAWW 300.0 - Anio						12/30/22 08:23	12/30/22 23:24	1
	ons, Ion Chr			Unit	D	12/30/22 08:23 Prepared	12/30/22 23:24 Analyzed	1 Dil Fac

Job ID: 890-3711-1 SDG: 03D2057041

## Lab Sample ID: 890-3711-1 lid

5

## **Surrogate Summary**

**Client: Ensolum** Project/Site: SEMU EUMONT #117

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

			Perce	ent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
880-23052-A-81-B MS	Matrix Spike	99	110		-
880-23052-A-81-C MSD	Matrix Spike Duplicate	102	111		6
890-3711-1	SS06	99	107		
LCS 880-42898/1-A	Lab Control Sample	98	108		
LCSD 880-42898/2-A	Lab Control Sample Dup	97	110		
MB 880-42894/5-A	Method Blank	94	104		2
MB 880-42898/5-A	Method Blank	94	108		0
Surrogate Legend					9

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

		Percent Surrogate Recovery (Acceptance Limits)							
Lak Camula ID		1CO1 (70-130)	OTPH1 (70-130)						
Lab Sample ID 880-23050-A-1-H MS	Client Sample ID Matrix Spike	98	90						
880-23050-A-1-I MSD	Matrix Spike Duplicate	91	84						
890-3711-1	SS06	40 S1-	32 S1-						
LCS 880-42928/2-A	Lab Control Sample	102	115						
LCSD 880-42928/3-A	Lab Control Sample Dup	102	113						
MB 880-42928/1-A	Method Blank	113	127						

#### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Job ID: 890-3711-1 SDG: 03D2057041

Prep Type: Total/NA

Page 25 of 244

**Eurofins Carlsbad** 

Client: Ensolum Project/Site: SEMU EUMONT #117

Lab Sample ID: MB 880-42894/5-A

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

	Qualifier	RL					
<0.00000			Unit	D	Prepared	Analyzed	Dil Fac
<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
<0.00400	U	0.00400	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
<0.00400	U	0.00400	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
MB	МВ						
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
94		70 - 130			12/29/22 13:11	12/31/22 01:40	1
104		70 - 130			12/29/22 13:11	12/31/22 01:40	1
	<0.00200 <0.00400 <0.00200 <0.00400 <i>MB</i> %Recovery 94	<0.00200 U <0.00400 U <0.00200 U <0.00400 U <i>MB MB</i> %Recovery <i>Qualifier</i> 94	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200

#### MB MB Analyte **Result Qualifier** RL Unit D Prepared Analyzed Dil Fac Benzene 12/29/22 13:35 12/31/22 13:19 <0.00200 U 0.00200 mg/Kg 1 Toluene 12/29/22 13:35 12/31/22 13:19 <0.00200 U 0.00200 mg/Kg 1 Ethylbenzene 12/29/22 13:35 12/31/22 13:19 <0.00200 U 0.00200 mg/Kg 1 m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg 12/29/22 13:35 12/31/22 13:19 1 o-Xylene <0.00200 U 0.00200 12/29/22 13:35 12/31/22 13:19 mg/Kg 1 Xylenes, Total <0.00400 U 0.00400 12/29/22 13:35 12/31/22 13:19 mg/Kg 1 MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 4-Bromofluorobenzene (Surr) 94 70 - 130 12/29/22 13:35 12/31/22 13:19 1 70 - 130 12/29/22 13:35 12/31/22 13:19 1,4-Difluorobenzene (Surr) 108 1

### Lab Sample ID: LCS 880-42898/1-A Matrix: Solid Analysis Batch: 42933

Analysis Batch: 42933

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1101		mg/Kg		110	70 - 130	
Toluene	0.100	0.09919		mg/Kg		99	70 - 130	
Ethylbenzene	0.100	0.09418		mg/Kg		94	70 - 130	
m-Xylene & p-Xylene	0.200	0.1909		mg/Kg		95	70 - 130	
o-Xylene	0.100	0.09308		mg/Kg		93	70 - 130	

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

Lab Sample ID: LCSD 880-42898/2-A	Client Sample ID: Lab Control Sample Dup								
Matrix: Solid							Prep Ty	pe: Tot	al/NA
Analysis Batch: 42933							Prep E	atch: 4	42898
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09527		mg/Kg		95	70 - 130	14	35

Eurofins Carlsbad

Prep Batch: 42898

Prep Type: Total/NA Prep Batch: 42898

**Client Sample ID: Lab Control Sample** 

**Client Sample ID: Method Blank** 

Client: Ensolum Project/Site: SEMU EUMONT #117 Page 27 of 244

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

Lab Sample ID: LCSD 880-42898/2-A Matrix: Solid Analysis Batch: 42933			C	Client Sa	mple	ID: Lat	Control Prep Ty Prep E	pe: Tot	tal/NA
-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.08669		mg/Kg		87	70 - 130	13	35
Ethylbenzene	0.100	0.08293		mg/Kg		83	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.1683		mg/Kg		84	70 - 130	13	35
o-Xylene	0.100	0.08294		mg/Kg		83	70 - 130	12	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

### Lab Sample ID: 880-23052-A-81-B MS Matrix: Solid Analysis Batch: 42933

Analysis Batch: 42933									Prep Batch: 42898
	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130
Toluene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130
Ethylbenzene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130
m-Xylene & p-Xylene	<0.00403	U F1	0.198	<0.00396	U F1	mg/Kg		0	70 - 130
o-Xylene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0.4	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

#### Lab Sample ID: 880-23052-A-81-C MSD Matrix: Solid Analysis Batch: 42933

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
Toluene	<0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
Ethylbenzene	<0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
m-Xylene & p-Xylene	<0.00403	U F1	0.198	<0.00397	U F1	mg/Kg		0	70 - 130	NC	35
o-Xylene	<0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0.4	70 - 130	8	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	102		70 - 130								

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

111

Lab Sample ID: MB 880-42928/1 Matrix: Solid Analysis Batch: 42937	<b>-</b> A						le ID: Method Prep Type: To Prep Batch:	otal/NA
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/30/22 08:23	12/30/22 13:03	1

70 - 130

Eurofins Carlsbad

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA Prep Batch: 42898

1,4-Difluorobenzene (Surr)

Client: Ensolum Project/Site: SEMU EUMONT #117

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

Lab Sample ID: MB 880-429 Matrix: Solid	28/1-A						C	Cile		Die ID: M		
Analysis Batch: 42937										Prep Ty Prep E		
Analysis Datch. 42007	N	IB MB								перь	Jaten.	42320
Analyte		ult Qualifier	RL		Unit		D	Pr	epared	Analyz	zed	Dil Fa
Diesel Range Organics (Over	<50	.0 U	50.0		mg/K	g	- 1		•	12/30/22		
C10-C28)												
Oll Range Organics (Over C28-C36)	<50	.0 U	50.0		mg/K	g	1	12/30	0/22 08:23	12/30/22	13:03	
	N	IB MB										
Surrogate	%Recove	ry Qualifier	Limits					Pr	repared	Analyz	zed	Dil Fac
1-Chlorooctane	1	13	70 - 130				1	12/30	0/22 08:23	12/30/22	13:03	
o-Terphenyl	12	27	70 - 130				1	12/30	0/22 08:23	12/30/22	13:03	1
Lab Sample ID: LCS 880-42	928/2-4					Clie	ant !	San		Lab Cor	ntrol S	amnlo
Matrix: Solid	520/2-A					one	,	oan		Prep Ty		
Analysis Batch: 42937										Prep E		
			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics			1000	849.1		mg/Kg		_	85	70 - 130		
(GRO)-C6-C10												
Diesel Range Organics (Over C10-C28)			1000	1082		mg/Kg			108	70 - 130		
010-020)												
Surrogate	LCS L		l insite									
Surrogate	%Recovery C	ualifier	Limits									
	102		70 130									
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4	102 115 <b>42928/3-A</b>		70 - 130 70 - 130		c	lient S	amp	ple		Control : Prep Tv		
1-Chlorooctane o-Terphenyl	115		70 - 130			lient S	amp	ple		Prep Ty Prep E	pe: To	tal/NA 42928
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937	115		70 <sub>-</sub> 130 Spike		LCSD		amţ			Prep Ty Prep E %Rec	pe: To Batch:	tal/NA 42928 RPD
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte	115		70 - 130 Spike Added	Result		Unit	amı	ple D		Prep Ty Prep E %Rec Limits	pe: To	tal/NA 42928 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937	115		70 <sub>-</sub> 130 Spike		LCSD		amı		%Rec	Prep Ty Prep E %Rec	pe: To Batch: 	tal/NA 42928 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	115		70 - 130 Spike Added	Result	LCSD	Unit	amı		%Rec	Prep Ty Prep E %Rec Limits	pe: To Batch: 	tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10	115		70 - 130 Spike Added 1000	Result 946.4	LCSD	Unit mg/Kg	amı		<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	115		70 - 130 Spike Added 1000	Result 946.4	LCSD	Unit mg/Kg	amı		<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	115 42928/3-A LCSD L %Recovery G		70 - 130  Spike Added 1000 1000 Limits	Result 946.4	LCSD	Unit mg/Kg	amţ		<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	115 <b>12928/3-A</b> LCSD L <u>%Recovery</u> 102		70 - 130  Spike Added 1000 1000  Limits 70 - 130	Result 946.4	LCSD	Unit mg/Kg	amı		<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	115 42928/3-A LCSD L %Recovery G		70 - 130  Spike Added 1000 1000 Limits	Result 946.4	LCSD	Unit mg/Kg	amı		<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	115 <b>12928/3-A</b> <b>LCSD</b> <u>%Recovery</u> <u>102</u> 113		70 - 130  Spike Added 1000 1000  Limits 70 - 130	Result 946.4	LCSD	Unit mg/Kg	amı	D	<b>%Rec</b> 95 108	Prep Ty           Prep E           %Rec           Limits           70 - 130           70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	115 <b>12928/3-A</b> <b>LCSD</b> <u>%Recovery</u> <u>102</u> 113		70 - 130  Spike Added 1000 1000  Limits 70 - 130	Result 946.4	LCSD	Unit mg/Kg	amı	D	%Rec 95 108	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20 20 Spike
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-23050-4	115 <b>12928/3-A</b> <b>LCSD</b> <u>%Recovery</u> <u>102</u> 113		70 - 130  Spike Added 1000 1000  Limits 70 - 130	Result 946.4	LCSD	Unit mg/Kg	am;	D	%Rec 95 108	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20 20 Spike tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-23050-7 Matrix: Solid	115 42928/3-A <i>LCSD L</i> <i>%Recovery G</i> 102 113 A-1-H MS Sample S	ample	70 - 130 Spike Added 1000 1000 Limits 70 - 130 70 - 130 70 - 130	Result 946.4 1085	LCSD Qualifier	Unit mg/Kg	amı	D	<u>%Rec</u> 95 108	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec	pe: To Batch: 	tal/NA 42928 RPD Limit 20 20 Spike tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-23050-4 Matrix: Solid Analysis Batch: 42937 Analyte	115 42928/3-A <i>LCSD L</i> %Recovery G 102 113 A-1-H MS Sample S Result G	ample Qualifier	70 - 130         Spike         Added         1000         1000         1000         1000         1000         Spike         Added	Result           946.4           1085           MS           Result	LCSD Qualifier	Unit mg/Kg mg/Kg Unit	amı	D	<u>%Rec</u> 95 108	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20 20 Spike tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-23050-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics	115 42928/3-A <i>LCSD L</i> <i>%Recovery G</i> 102 113 A-1-H MS Sample S	ample Qualifier	70 - 130 Spike Added 1000 1000 Limits 70 - 130 70 - 130 70 - 130	Result 946.4 1085	LCSD Qualifier	Unit mg/Kg mg/Kg	amı 	D Cli	<u>%Rec</u> 95 108	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec	pe: To Batch: 	tal/NA 42928 RPD Limit 20 20 Spike tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-23050-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10	115 42928/3-A <i>LCSD L</i> %Recovery G 102 113 A-1-H MS Sample S Result G	ample Qualifier	70 - 130         Spike         Added         1000         1000         1000         1000         1000         Spike         Added	Result           946.4           1085           MS           Result	LCSD Qualifier	Unit mg/Kg mg/Kg Unit mg/Kg	amı	D Cli	<u>%Rec</u> 95 108	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20 20 Spike tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-23050-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics	115 42928/3-A 42928/3-A <i>LCSD L %Recovery 102 113 113 A-1-H MS Sample S Result C &lt;49.9 U</i>	ample Qualifier	70 - 130         Spike         Added         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added         999	Result           946.4           1085           MS           Result           1116	LCSD Qualifier	Unit mg/Kg mg/Kg Unit	amı 	D Cli	%Rec           95           108           ient Sam           %Rec           109	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20 20 Spike tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-23050-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	115 42928/3-A 42928/3-A <i>LCSD L %Recovery 102 113 113 A-1-H MS Sample S Result C &lt;49.9 U</i>	ample Qualifier 1 F2	70 - 130         Spike         Added         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added         999	Result           946.4           1085           MS           Result           1116	LCSD Qualifier	Unit mg/Kg mg/Kg Unit mg/Kg	amı 	D Cli	%Rec           95           108           ient Sam           %Rec           109	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20 20 Spike tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-23050-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	115 <b>LCSD L</b> <b>%Recovery G</b> 102 113 <b>A-1-H MS</b> <b>Sample S</b> <b>Result G</b> <49.9 U	ample Qualifier F2 15	70 - 130         Spike         Added         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added         999	Result           946.4           1085           MS           Result           1116	LCSD Qualifier	Unit mg/Kg mg/Kg Unit mg/Kg	amı	D Cli	%Rec           95           108           ient Sam           %Rec           109	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20 20 Spike tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-23050-4 Matrix: Solid Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	115 42928/3-A 42928/3-A <i>LCSD L %Recovery G</i> 102 113 A-1-H MS Sample S Result G <49.9 U <49.9 U	ample Qualifier F2 15	70 - 130         Spike         Added         1000         1000         1000         1000         500         70 - 130         70 - 130         70 - 130         999         999         999         999	Result           946.4           1085           MS           Result           1116	LCSD Qualifier	Unit mg/Kg mg/Kg Unit mg/Kg	amı 	D Cli	%Rec           95           108           ient Sam           %Rec           109	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: 	tal/NA 42928 RPD Limit 20 20 Spike tal/NA

5

Job ID: 890-3711-1 SDG: 03D2057041

**Eurofins Carlsbad** 

\_\_\_\_\_

Page 29 of 244

5

Job ID: 890-3711-1 SDG: 03D2057041

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

Matrix: Solid	-A-1-I MSD					<b>Client S</b>	amp	le ID: N	latrix Spil		
									Prep Ty	pe: Tot	tal/NA
Analysis Batch: 42937										Batch:	
	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	<49.9	U F2	999	897.0	F2	mg/Kg		88	70 - 130	22	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	976.9		mg/Kg		96	70 - 130	8	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	91		70 - 130	-							
o-Terphenyl	84		70 - 130								
lethod: 300.0 - Anions Lab Sample ID: MB 880-42 Matrix: Solid		<u> </u>					Clie	ent Sam	ple ID: M Prep T		
Analysis Batch: 42947											
	_	MB MB				_	_				
Analyte Chloride		sult Qualifie	r	<b>RL</b> 5.00	Unit mg/K	D	P	repared	Analy: 12/31/22		Dil Fac
Matrix: Solid Analysis Batch: 42947									Prep T	ype. ot	Jubic
-			<b>.</b>								
			Spike	LCS	LCS				%Rec		
Analyte			Spike Added	Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
-			•	_		Unit mg/Kg	<u>D</u>	<b>%Rec</b>			
Chloride	-42865/3-A		Added	Result	Qualifier	mg/Kg		105	Limits 90 - 110	 Sample	e Dup
Chloride Lab Sample ID: LCSD 880	-42865/3-A		Added	Result	Qualifier	mg/Kg		105	Limits		
Chloride Lab Sample ID: LCSD 880 Matrix: Solid	-42865/3-A		Added	Result	Qualifier	mg/Kg		105	Limits 90 - 110 Control		
Chloride Lab Sample ID: LCSD 880 Matrix: Solid	-42865/3-A		Added	Result 261.6	Qualifier	mg/Kg		105	Limits 90 - 110 Control		oluble
Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42947	-42865/3-A		Added 250	Result 261.6	Qualifier	mg/Kg		105	Limits 90 - 110 O Control Prep T		
Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42947 Analyte	-42865/3-A		Added 250 Spike	Result 261.6	Qualifier C	mg/Kg Client San	nple	105	Limits 90 - 110 Control Prep Ty %Rec	ype: So	RPD Limit
Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42947 Analyte Chloride			Added 250 Spike Added	Result 261.6 LCSD Result	Qualifier C	mg/Kg Client San Unit	nple	105 ID: Lab %Rec 102	Limits 90 - 110 Control Prep Ty %Rec Limits 90 - 110	ype: So RPD 3	RPD Limit 20
Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-23059			Added 250 Spike Added	Result 261.6 LCSD Result	Qualifier C	mg/Kg Client San Unit	nple	105 ID: Lab %Rec 102	Limits 90 - 110 O Control Prep T %Rec Limits 90 - 110 mple ID:	ype: So <u>RPD</u> 3 Matrix	RPC Limit 20 Spike
Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-23059 Matrix: Solid			Added 250 Spike Added	Result 261.6 LCSD Result	Qualifier C	mg/Kg Client San Unit	nple	105 ID: Lab %Rec 102	Limits 90 - 110 Control Prep Ty %Rec Limits 90 - 110	ype: So <u>RPD</u> 3 Matrix	RPD Limit 20 Spike
Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-23059 Matrix: Solid	)-A-6-B MS		Added 250 Spike Added	Result 261.6 LCSD Result 254.8	Qualifier C	mg/Kg Client San Unit	nple	105 ID: Lab %Rec 102	Limits 90 - 110 O Control Prep T %Rec Limits 90 - 110 mple ID:	ype: So <u>RPD</u> 3 Matrix	RPD Limit 20 Spike
Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-23059 Matrix: Solid Analysis Batch: 42947 Analyte	9-A-6-B MS Sample	Sample Qualifier	Added 250 Spike Added 250	Result 261.6 LCSD Result 254.8	Qualifier C LCSD Qualifier	mg/Kg Client San Unit	nple	105 ID: Lab %Rec 102	Limits 90 - 110 O Control Prep Ty %Rec Limits 90 - 110 mple ID:   Prep Ty	ype: So <u>RPD</u> 3 Matrix	RPD Limit 20 Spike
Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-23059 Matrix: Solid Analysis Batch: 42947 Analyte	9-A-6-B MS Sample		Added 250 Spike Added 250 Spike	Result 261.6 LCSD Result 254.8	Qualifier LCSD Qualifier MS	mg/Kg Client San Unit mg/Kg	nple _ D CI	105 ID: Lab <u>%Rec</u> 102 ient Sa	Limits 90 - 110 Control Prep Ty %Rec Limits 90 - 110 mple ID: 1 Prep Ty %Rec	ype: So <u>RPD</u> 3 Matrix	RPD Limit 20 Spike
Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-23059 Matrix: Solid Analysis Batch: 42947 Analyte Chloride	D-A-6-B MS Sample <u>Result</u> 63.3	Qualifier	Added 250 Spike Added 250 Spike Added	Result 261.6 LCSD Result 254.8 MS Result	Qualifier LCSD Qualifier MS	mg/Kg Client San Unit mg/Kg	nple _ D CI	105 ID: Lab <u>%Rec</u> 102 ient Sa <u>%Rec</u> 106	Limits 90 - 110 Control Prep Ty %Rec Limits 90 - 110 mple ID: 1 Prep Ty %Rec Limits	ype: So RPD 3 Matrix ype: So	Spike
Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-23059 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-23059 Matrix: Solid	D-A-6-B MS Sample <u>Result</u> 63.3	Qualifier	Added 250 Spike Added 250 Spike Added	Result 261.6 LCSD Result 254.8 MS Result	Qualifier LCSD Qualifier MS	mg/Kg Client San Unit mg/Kg	nple _ D CI	105 ID: Lab <u>%Rec</u> 102 ient Sa <u>%Rec</u> 106	Limits 90 - 110 Control Prep Ty %Rec Limits 90 - 110 mple ID: I %Rec Limits 90 - 110	ype: So <u>RPD</u> 3 Matrix ype: So ke Dup	Spike
Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-23059 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-23059	9-A-6-B MS Sample Result 63.3 9-A-6-C MSE	Qualifier	Added 250 Spike Added 250 Spike Added	Result 261.6 LCSD Result 254.8 MS Result 328.6	Qualifier LCSD Qualifier MS	mg/Kg Client San Unit mg/Kg	nple _ D CI	105 ID: Lab <u>%Rec</u> 102 ient Sa <u>%Rec</u> 106	Limits 90 - 110 Control Prep Ty %Rec Limits 90 - 110 mple ID: %Rec Limits 90 - 110 %Rec Limits 90 - 110	ype: So <u>RPD</u> 3 Matrix ype: So ke Dup	Spike

**Eurofins Carlsbad** 

4

101

mg/Kg

90 - 110

20

63.3

Chloride

250

316.8

## **QC Association Summary**

Client: Ensolum Project/Site: SEMU EUMONT #117 Job ID: 890-3711-1 SDG: 03D2057041

## **GC VOA**

## Prep Batch: 42894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
MB 880-42894/5-A	Method Blank	Total/NA	Solid	5035	
rep Batch: 42898					
₋ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
390-3711-1	SS06	Total/NA	Solid	5035	
/IB 880-42898/5-A	Method Blank	Total/NA	Solid	5035	
-CS 880-42898/1-A	Lab Control Sample	Total/NA	Solid	5035	
CSD 880-42898/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
380-23052-A-81-B MS	Matrix Spike	Total/NA	Solid	5035	
380-23052-A-81-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
nalysis Batch: 4293	3				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-3711-1	SS06	Total/NA	Solid	8021B	4289
MB 880-42894/5-A	Method Blank	Total/NA	Solid	8021B	4289
MB 880-42898/5-A	Method Blank	Total/NA	Solid	8021B	4289
LCS 880-42898/1-A	Lab Control Sample	Total/NA	Solid	8021B	4289

### Analysis Batch: 43059

Lab Control Sample Dup

Matrix Spike Duplicate

Matrix Spike

LCSD 880-42898/2-A

880-23052-A-81-B MS

880-23052-A-81-C MSD

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3711-1	SS06	Total/NA	Solid	Total BTEX	

Total/NA

Total/NA

Total/NA

Solid

Solid

Solid

8021B

8021B

8021B

## GC Semi VOA

### Prep Batch: 42928

Lab Sample ID 890-3711-1	Client Sample ID SS06	Prep Type Total/NA	Matrix Solid	Method Prep	Batch
MB 880-42928/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42928/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42928/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23050-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23050-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 42937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3711-1	SS06	Total/NA	Solid	8015B NM	42928
MB 880-42928/1-A	Method Blank	Total/NA	Solid	8015B NM	42928
LCS 880-42928/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42928
LCSD 880-42928/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42928
880-23050-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	42928
880-23050-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3711-1	SS06	Total/NA	Solid	8015 NM	

5

8

42898

42898

42898

## **QC Association Summary**

Client: Ensolum Project/Site: SEMU EUMONT #117

## HPLC/IC

## Leach Batch: 42865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3711-1	SS06	Soluble	Solid	DI Leach	
MB 880-42865/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42865/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42865/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-23059-A-6-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-23059-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

## Analysis Batch: 42947

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-3711-1	SS06	Soluble	Solid	300.0	42865	
MB 880-42865/1-A	Method Blank	Soluble	Solid	300.0	42865	
LCS 880-42865/2-A	Lab Control Sample	Soluble	Solid	300.0	42865	
LCSD 880-42865/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42865	
880-23059-A-6-B MS	Matrix Spike	Soluble	Solid	300.0	42865	
880-23059-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	42865	

### Job ID: 890-3711-1 SDG: 03D2057041

## Client Sample ID: SS06 Date Collected: 12/22/22 10:15 Date Received: 12/27/22 13:31

Job ID: 890-3711-1 SDG: 03D2057041

### Lab Sample ID: 890-3711-1 Matrix: Solid

Matrix: Solid

9

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	42898	12/29/22 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42933	12/31/22 21:08	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			43059	01/03/23 09:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43066	01/03/23 10:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42928	12/30/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42937	12/30/22 23:24	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	42865	12/29/22 10:48	KS	EET MID
Soluble	Analysis	300.0		1			42947	12/31/22 02:23	СН	EET MID

### Laboratory References:

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

**Eurofins Carlsbad** 

**Released to Imaging: 2/20/2023 2:06:44 PM** 

**Accreditation/Certification Summary** 

Client: Ensolum Project/Site: SEMU EUMONT #117 Job ID: 890-3711-1 SDG: 03D2057041

10

## Laboratory: Eurofins Midland

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

uthority	Pro	ogram	Identification Number	Expiration Date
exas	NE	ELAP	T104704400-22-25	06-30-23
The following analytes	are included in this reno	rt but the laboratory is r	not certified by the governing authority.	This list may include analytes for which
the agency does not o	•		for certified by the governing autionty.	
0,	•	Matrix	Analyte	
the agency does not o	offer certification.			

**Eurofins Carlsbad** 

## **Method Summary**

Client: Ensolum Project/Site: SEMU EUMONT #117 Job ID: 890-3711-1 SDG: 03D2057041

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

Page 35 of 244

Client: Ensolum Project/Site: SEMU EUMONT #117

Job ID: 890-3711-1
SDG: 03D2057041

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3711-1	SS06	Solid	12/22/22 10:15	12/27/22 13:31	0.2

🔅 eurofins		wimner	ant Tast	00	т	Chain of Custody Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300	Chain of Custody , TX (281) 240-4200, Dallas, TX (214) 90	<b>of C</b>	<b>usto</b> llas, TX (2	14) 902-0	300			\$	inter O	Work Order No.	2				
	Xe	Xenco	Zenco	Sur	EL	Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	(915) 585-	140, San A -3443, Lub	ntonio, TX bock, TX (	(210) 509 806) 794-	)-3334 1296					fuer h	<u></u>				- I
					н	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	575) 392-7	550, Carls	bad, NM (	575) 988-	3199				WWW.X	www.xenco.com	m	Page_		of	-
Project Manager:	Hadlie Green				Bill to: (if different)	ent)	Kalei Jennings	nings							5	lork Or	der Coi	Work Order Comments	-		
Company Name:	Ensolum, LLC				Company Name	me:	Ensolum, LLC	LLC					Program: UST/PST PRP Brownfields	UST/PS	ST DPF	۳ چ	ownfield	Is RC	0	uperfund	
Address:	3122 Nat'l Parks Highway	s Highway			Address:		3122 Na	3122 Nat'l Parks Highway	lighway			5	State of Project:	roject:	NM			]	]		]
City, State ZIP:	Carlsbad, NM 88220	8220			City, State ZIP:	P:	Carlsbad, NM 88220	, NM 882	20			R	eporting	Level II	Leve		ST/US	Reporting: Level II Level III PST/UST			
Phone:	432-557-8895			Email:		solum.co	ım, kjenr	nings@e	nsolum.	com			Deliverables: EDD	es: EDI		AD	ADaPT	Other:	er.		
Project Name:	SEMU EL	SEMU EUMONT #117	117	Turn	Turn Around						ANALYSIS REQUEST	REQU	EST				$\left  \right $	Pres	ervative	Preservative Codes	3,
Project Number:	03D;	03D2057041		Routine	Rush	Pres.										-	Non	None: NO	DIV	DI Water: H <sub>2</sub> O	20
Project Location:	32.5559572, -103.2069571	-103.206		Due Date:		L		-									Coo	Cool: Cool	Me	MeOH: Me	
Sampler's Name:	Julianna	Julianna Falcomata		TAT starts th	TAT starts the day received by	3 Q				_			_				HCL	HCL: HC	NN	HNO3: HN	
SAMPLE RECEIPT	PT Temp Blank	-	Yes No	Wet Ice:	Yes No	eters		-									H3P	H3PO4: HP			
Samples Received Intact:	+		Thermometer ID:	D	~	iram		_									NaH	NaHSO4: NABIS	BIS		
Cooler Custody Seals:	Yes	MA	Correction Factor:	ctor:	0.0.	Pa				_							Naz	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ; NaSO <sub>3</sub>	SO3	•	
Sample Custody Seals	Is: Yes No	NA	Temperature Reading:	Reading:	1.1			ES		968	890-3711 CI	Chain of Custody	ustody			1	NaC	NaOH+Ascorbic Acid: SAPC	bic Acid	SAPC	
Sample Identification	tification	Matrix	Date Sampled	Time Sampled	Depth Grab/ Comp	np Cont	BTEX	TPH CHLOR			-							Sam	ple Cor	Sample Comments	
SSOM		S		IDIS	·2' C	-								++-			D	MARE	12310	Solalattel E	les.
																++					
																	$\vdash$				
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	010 200.8 / 6020: nd Metal(s) to be ana	020: e analyzec		BRCRA 13	RCRA 13PPM Texas 11 A		Sb As Ba Sb As Ba	Ba Be Ba Be	B Cd Cr	Ca Cr Co Co Cu Pb	Mn	Fe Pb Mg Mo Ni Se	Mg Mn Se Ag	Mn Mo Ni Ag TI U	K Se	Ag SiO <sub>2</sub> Hg: 1631 /	D <sub>2</sub> Na 1 / 245	Ag SiO <sub>2</sub> Na Sr TI Sn Hg: 1631 / 245.1 / 7470	Sn U V 70 / 7471	1 1	
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 service. Eurofins Xenco, A minimum charge of \$55.00 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.	document and reling to will be liable only in himum charge of \$85.	uishment of s for the cost of 00 will be app	amples const f samples and blied to each p	Itutes a valid p shall not assuroject and a cl	unchase order fr ume any respons harge of \$5 for ea	rom client c sibility for a ach sample	ompany to ny losses o submitted	Eurofins X r expenses to Eurofins	incurred b Xenco, bu	filiates an y the clier rt not anal	d subcontra ht if such to yzed. These	actors. It a sses are d e terms wil	assigns stu lue to circu Il be enfor	andard te umstances ced unless	rms and c beyond t previous	onditions he contro ly negotia	ted.				
Relinquished by: (Signature)	. (Signature)	2	Received	Received,by: (Signature)	ture)		Date/Time	me	Reli	inquishe	Relinquished by: (Signature)	ignature	(6	Rec	eived by	Received by: (Signature)	ature)		Da	Date/Time	
- O MAN	in	211	TM )			12.3	2-27.22	133	/2												
1 Martin	CAAA		1						4				-					+-			
SU S						-			0				-					-	Revised Date	Revised Date 08/25/2020 Rev 2020.2	Rev. 2020.2
(																					

5

12 13
## Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 3711 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	

List Source: Eurofins Carlsbad

Eurofins Carlsbad Released to Imaging: 2/20/2023 2:06:44 PM

## Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

#### Login Number: 3711 List Number: 2 Creator: Teel, Brianna

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

Job Number: 890-3711-1 SDG Number: 03D2057041 List Source: Eurofins Midland

List Creation: 12/29/22 11:42 AM

Received by OCD: 2/2/2023 9:39:03 AM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Hadlie Green Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 1/16/2023 10:25:14 AM Revision 1

# JOB DESCRIPTION

SEMU EUMONT #117 SDG NUMBER 03D2057041

# **JOB NUMBER**

890-3712-1

**RT R DR DR** 

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

# **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

ley Taylor

Generated 1/16/2023 10:25:14 AM Revision 1

Authorized for release by Holly Taylor, Project Manager Holly.Taylor@et.eurofinsus.com Designee for 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

#### Laboratory Job ID: 890-3712-1 SDG: 03D2057041

# **Table of Contents**

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	
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

#### Page A2 of 244

ruge 42 0j 2	44
ns/Glossary	1
Job ID: 890-3712-1 SDG: 03D2057041	2
	3
	4

## GC VOA

**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 VC	Α	
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.	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	-
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	-
%R	Percent Recovery	
CFL	Contains Free Liquid	

CFU	Colony Forming Unit
CNF	Contains No Free Liquid

DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)

DI RARE IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
	indicates a Divident, ne analysis, ne exclusion, or additional initial inetals/amon analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

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

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

Method Quantitation Limit MQL

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)

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

Toxicity Equivalent Factor (Dioxin) TEF

Toxicity Equivalent Quotient (Dioxin) TEQ

TNTC Too Numerous To Count

## **Case Narrative**

### Job ID: 890-3712-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-3712-1

#### Revision

The report being provided is a revision of the original report sent on 1/3/2023. The report (revision 1) is being revised to change the sample ID per Hadlie Green (email).

#### Receipt

The sample was received on 12/27/2022 1:31 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 was 1.2° C.

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS05 (890-3712-1).

#### GC VOA

Method 8021B: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-42898 and analytical batch 880-42933. The associated laboratory control sample (LCS) met acceptance criteria.

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

#### GC Semi VOA

Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-42937/32), (CCV 880-42937/48), (CCV 880-42937/59) and (LCSD 880-42996/3-A). Evidence of matrix interferences is not obvious.

Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (880-23059-A-1-F MS) and (880-23059-A-1-G MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015B NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-42996 and analytical batch 880-42937 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 8015B NM: CCV biased high for diesel range hydrocarbons, however an acceptable CCV was analyzed within the 12 hour window, therefore data was qualified and reported. (CCV 880-42937/48)

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

#### **General Chemistry**

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

#### **Organic Prep**

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

#### VOA Prep

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

## **Client Sample Results**

Client: Ensolum Project/Site: SEMU EUMONT #117

#### **Client Sample ID: SS05** Date Collected: 12/22/22 10:10 Date Received: 12/27/22 13:31 Sample Depth: 0.2

Job ID: 890
SDG: 03D

Page 44 of 244

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 21:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 21:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 21:28	1
m-Xylene & p-Xylene	< 0.00399	U	0.00399	mg/Kg		12/29/22 13:35	12/31/22 21:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 21:28	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		12/29/22 13:35	12/31/22 21:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			12/29/22 13:35	12/31/22 21:28	1
1,4-Difluorobenzene (Surr)	111		70 - 130			12/29/22 13:35	12/31/22 21:28	1
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg		. <u> </u>	01/03/23 09:47	1
Method: SW846 8015 NM - Di Analyte	Result	Qualifier		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/03/23 10:37	1
-								
Method: SW846 8015B NM - I	Diesel Range	• Organics	(DRO) (GC)					·
Method: SW846 8015B NM - I Analyte		e Organics Qualifier	( <b>DRO) (GC)</b> RL	Unit	D	Prepared	Analyzed	Dil Fac
		Qualifier		Unit mg/Kg	<u>D</u>	Prepared 12/30/22 15:05	Analyzed 12/31/22 07:52	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U			<u>D</u>	12/30/22 15:05		Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10	<b>Result</b> <49.9	Qualifier U U	<b>RL</b> 49.9	mg/Kg	<u>D</u>	12/30/22 15:05 12/30/22 15:05	12/31/22 07:52	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9	Qualifier U U U	RL          49.9          49.9	mg/Kg	<u>D</u>	12/30/22 15:05 12/30/22 15:05	12/31/22 07:52 12/31/22 07:52	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<b>Result</b> <49.9 <49.9 <49.9	Qualifier U U U	RL	mg/Kg	<u>D</u>	12/30/22 15:05 12/30/22 15:05 12/30/22 15:05	12/31/22 07:52 12/31/22 07:52 12/31/22 07:52	Dil Fac 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result         <49.9	Qualifier U U U	RL	mg/Kg	<u>D</u>	12/30/22 15:05 12/30/22 15:05 12/30/22 15:05 <b>Prepared</b> 12/30/22 15:05	12/31/22 07:52 12/31/22 07:52 12/31/22 07:52 Analyzed	Dil Fac 1 1 1 Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result         <49.9	Qualifier U U Qualifier	RL	mg/Kg	<u> </u>	12/30/22 15:05 12/30/22 15:05 12/30/22 15:05 <b>Prepared</b> 12/30/22 15:05	12/31/22 07:52       12/31/22 07:52       12/31/22 07:52       Analyzed       12/31/22 07:52	Dil Fac 1 1 1 Dil Fac
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         <49.9	Qualifier U U Qualifier	RL	mg/Kg	D	12/30/22 15:05 12/30/22 15:05 12/30/22 15:05 <b>Prepared</b> 12/30/22 15:05	12/31/22 07:52       12/31/22 07:52       12/31/22 07:52       Analyzed       12/31/22 07:52	Dil Fac 1 1 1 Dil Fac

1/16/2023 (Rev. 1)

## **Surrogate Summary**

**Client: Ensolum** Project/Site: SEMU EUMONT #117

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

			Percent Surrogate Recovery (Acceptance L	.imits)
		BFB1	)FBZ1	
Lab Sample ID	Client Sample ID	(70-130)	′0-130)	
880-23052-A-81-B MS	Matrix Spike	99	110	
880-23052-A-81-C MSD	Matrix Spike Duplicate	102	111	
890-3712-1	SS05	106	111	
LCS 880-42898/1-A	Lab Control Sample	98	108	
LCSD 880-42898/2-A	Lab Control Sample Dup	97	110	
MB 880-42894/5-A	Method Blank	94	104	
MB 880-42898/5-A	Method Blank	94	108	
Surrogate Legend				

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

			Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)		
880-23059-A-1-F MS	Matrix Spike		46 S1-		
880-23059-A-1-G MSD	Matrix Spike Duplicate	68 S1-	60 S1-		
890-3712-1	SS05	110	101		
LCS 880-42996/2-A	Lab Control Sample	106	118		
LCSD 880-42996/3-A	Lab Control Sample Dup	119	132 S1+		
MB 880-42996/1-A	Method Blank	115	127		

#### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Job ID: 890-3712-1

Prep Type: Total/NA

Prep Type: Total/NA

**Eurofins Carlsbad** 

Client: Ensolum Project/Site: SEMU EUMONT #117

Lab Sample ID: MB 880-42894/5-A

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

Matrix: Solid Analysis Batch: 42933							Prep Type: To Prep Batch:	
	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			12/29/22 13:11	12/31/22 01:40	1
1,4-Difluorobenzene (Surr)	104		70 - 130			12/29/22 13:11	12/31/22 01:40	1
Lab Sample ID: MB 880-42 Matrix: Solid	898/5-A						le ID: Method Prep Type: To	

# Analysis Batch: 42933

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			12/29/22 13:35	12/31/22 13:19	1
1,4-Difluorobenzene (Surr)	108		70 - 130			12/29/22 13:35	12/31/22 13:19	1

#### Lab Sample ID: LCS 880-42898/1-A Matrix: Solid Analysis Batch: 42933

Analysis Batch: 42933							Prep B	atch: 42898
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1101		mg/Kg		110	70 - 130	
Toluene	0.100	0.09919		mg/Kg		99	70 - 130	
Ethylbenzene	0.100	0.09418		mg/Kg		94	70 - 130	
m-Xylene & p-Xylene	0.200	0.1909		mg/Kg		95	70 - 130	
o-Xylene	0.100	0.09308		mg/Kg		93	70 - 130	

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

Lab Sample ID: LCSD 880-42898/2-A			C	Client Sa	mple	ID: Lat	Control	Sample	e Dup
Matrix: Solid							Prep Ty	pe: Tot	al/NA
Analysis Batch: 42933							Prep B	atch:	42898
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09527		mg/Kg		95	70 - 130	14	35

Eurofins Carlsbad

Page 46 of 244

Job ID: 890-3712-1

SDG: 03D2057041

Prep Batch: 42898

Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

**Client Sample ID: Method Blank** 

# 8 9 1 1 1

*Released to Imaging: 2/20/2023 2:06:44 PM* Page 8 of 20

Client: Ensolum Project/Site: SEMU EUMONT #117

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

Lab Sample ID: LCSD 880-42898/2-A Matrix: Solid Analysis Batch: 42933			C	Client Sa	mple	ID: Lat	Control Prep Ty Prep E		tal/NA
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.08669		mg/Kg		87	70 - 130	13	35
Ethylbenzene	0.100	0.08293		mg/Kg		83	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.1683		mg/Kg		84	70 - 130	13	35
o-Xylene	0.100	0.08294		mg/Kg		83	70 - 130	12	35
I CSD / CSD									

	LUSD LU	30	
Surrogate	%Recovery Qu	alifier Limits	
4-Bromofluorobenzene (Surr)	97	70 - 130	)
1,4-Difluorobenzene (Surr)	110	70 - 130	)

#### Lab Sample ID: 880-23052-A-81-B MS Matrix: Solid Analysis Batch: 42933

Analysis Batch: 42933									Prep Batch: 42898
	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130
Toluene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130
Ethylbenzene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130
m-Xylene & p-Xylene	<0.00403	U F1	0.198	<0.00396	U F1	mg/Kg		0	70 - 130
o-Xylene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0.4	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

#### Lab Sample ID: 880-23052-A-81-C MSD Matrix: Solid Analysis Batch: 42933

7 maryolo Batom 42000											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	< 0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
Toluene	<0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
Ethylbenzene	<0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
m-Xylene & p-Xylene	< 0.00403	U F1	0.198	<0.00397	UF1	mg/Kg		0	70 - 130	NC	35
o-Xylene	<0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0.4	70 - 130	8	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	102		70 - 130								

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

111

Lab Sample ID: MB 880-42996/1-A Matrix: Solid Analysis Batch: 42937						le ID: Method Prep Type: To Prep Batch:	otal/NA
	MB MB						
Analyte Re	sult Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics <	50.0 U	50.0	mg/Kg		12/30/22 15:05	12/31/22 00:12	1
(GRO)-C6-C10							

70 - 130

**Eurofins Carlsbad** 

Page 47 of 244

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

**Client Sample ID: Matrix Spike** 

Prep Type: Total/NA

Prep Type: Total/NA Prep Batch: 42898

1,4-Difluorobenzene (Surr)

1/16/2023 (Rev. 1)

Client: Ensolum Project/Site: SEMU EUMONT #117

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

Lab Sample ID: MB 880-429	996/1-4							Clie	nt Samr	ole ID: M	ethod	Blank
Matrix: Solid								•	in ounip	Prep Ty		
Analysis Batch: 42937										Prep E		
Analysis Datch: 42557		MB MB								перь	aten.	4233
Analyte		ult Qualifier	RL		Unit		D	Pr	epared	Analyz	red	Dil Fa
Diesel Range Organics (Over					<u>mg/ł</u>				0/22 15:05			Birra
C10-C28)		0.0 0	00.0		iiig/i	<b>`</b> 9		12,00	, 22 10.00	12/01/22	00.12	
Oll Range Organics (Over C28-C36	) <50	0.0 U	50.0		mg/ł	٢g		12/30	)/22 15:05	12/31/22	00:12	
0		MB MB						-				D// E.
Surrogate		ery Qualifier	- <u>Limits</u>						repared	Analyz		Dil Fa
1-Chlorooctane		115	70 - 130 70 - 130							12/31/22		
o-Terphenyl	1	27	70 - 130					12/30	)/22 15:05	12/31/22	00:12	
Lab Sample ID: LCS 880-42	2996/2-A					Clie	ent	San	nnle ID:	Lab Cor	ntrol S	amnle
Matrix: Solid						U.I.	Cint	oun	-	Prep Ty		
Analysis Batch: 42937										Prep E	-	
			Spike	LCS	LCS					%Rec		
Analyte			Added		Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics			1000	942.2		mg/Kg			94	70 - 130		
(GRO)-C6-C10			-	_		5. 5						
Diesel Range Organics (Over			1000	1120		mg/Kg			112	70 - 130		
C10-C28)												
	LCS I	LCS										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	106		70 - 130									
o-Terphenyl	118		70 - 130									
Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 42937							, and	pic		Control Prep Ty Prep E	pe: To	tal/N/ 4299
			Spike	LCSD	LCSD					%Rec		RPE
Analyte			Added		Qualifier	Unit		D	%Rec	Limits	RPD	
Gasoline Range Organics			1000	1025		mg/Kg			103	70 - 130	8	20
(GRO)-C6-C10 Discol Banga Organica (Over			1000	1258		malka			126	70 - 130	12	20
Diesel Range Organics (Over C10-C28)			1000	1250		mg/Kg			120	70-150	12	20
010 020)												
	LCSD I											
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	119	C1+	70 - 130 70 - 130									
o-Terphenyl	132 3	5/+	70 - 130									
Lab Sample ID: 880-23059-	Δ-1-F MS							Cli	ent Sam	ple ID: I	Matrix	Snike
Matrix: Solid								-		Prep Ty		
Analysis Batch: 42937										Prep E		
	Sample S	Sample	Spike	MS	MS					%Rec		
Analyte	Result (		Added		Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9		999	958.3		mg/Kg		· ·	91	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9 l	J F1 F2	999	534.1	F1	mg/Kg			51	70 - 130		
, ,												
Surrogata	MS /		l imita									
Surrogate	%Recovery 53		Limits 70 - 130									
1-Chlorooctane	53 3	- i c	70-130									

Job ID: 890-3712-1 SDG: 03D2057041

Eurofins Carlsbad

o-Terphenyl

70 - 130

46 S1-

Job ID: 890-3712-1 SDG: 03D2057041

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

Matrix: Solid						Client Sa	p		Prep Ty	pe: Tot	
Analysis Batch: 42937	Commis	Commite	Omilia	MOD	MOD					Batch:	
Amelyin	Sample		Spike		MSD	11	<b>_</b>	%Dee	%Rec Limits	000	RPD
Analyte		Qualifier	Added		Qualifier	Unit	<u>D</u>	%Rec		RPD	Limi
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	981.9		mg/Kg		94	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2	999	708.7	F1 F2	mg/Kg		69	70 - 130	28	2
	MSD										
Surrogate	%Recovery		Limits	-							
1-Chlorooctane		S1-	70 - 130								
o-Terphenyl	60	S1-	70 - 130								
Aethod: 300.0 - Anion Lab Sample ID: MB 880-4 Matrix: Solid Analysis Batch: 42947		Jilatograf	лту				Clie	ent Sam	nple ID: M Prep Ty		
		МВ МВ									
Analyte	Re	sult Qualifier		RL	Unit	D	Ρ	repared	Analyz	zed	Dil Fa
Chloride		5.00 U		5.00	mg/K				12/31/22		
Analysis Batch: 42947											
Analyte			Spike Added	_	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
•			•	_		Unit mg/Kg	D	<b>%Rec</b>			
Chloride Lab Sample ID: LCSD 88 Matrix: Solid	0-42865/3-A		Added	Result	Qualifier			105	Limits 90 - 110		
Chloride Lab Sample ID: LCSD 88 Matrix: Solid	 0-42865/3-A		Added	Result 261.6	Qualifier	mg/Kg		105	Limits 90 - 110		olubl
Chloride Lab Sample ID: LCSD 88 Matrix: Solid Analysis Batch: 42947	0-42865/3-A		Added 250	Result 261.6	Qualifier	mg/Kg		105	Limits 90 - 110 O Control Prep Ty		RPI
Chloride Lab Sample ID: LCSD 88 Matrix: Solid Analysis Batch: 42947 Analyte	0-42865/3-A		Added 250 Spike	Result 261.6	Qualifier	mg/Kg Client Sam	ple	105	Limits 90 - 110 Control Prep Ty %Rec	ype: So	RPI Lim
Analyte Chloride Lab Sample ID: LCSD 88 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 42947			Added 250 Spike Added	Result 261.6 LCSD Result	Qualifier	mg/Kg Client Sam Unit	ple	105 ID: Lab %Rec 102	Limits 90 - 110 Control Prep Ty %Rec Limits	ype: So <u>RPD</u> 3 Matrix 3	RPI Limi 20 Spike
Chloride Lab Sample ID: LCSD 88 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-2305 Matrix: Solid			Added 250 Spike Added 250	Result 261.6 LCSD Result 254.8	Qualifier C LCSD Qualifier	mg/Kg Client Sam Unit	ple	105 ID: Lab %Rec 102	Limits 90 - 110 Control 3 Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty	ype: So <u>RPD</u> 3 Matrix 3	RPI Limi 20 Spike
Chloride Lab Sample ID: LCSD 88 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 42947	59-A-6-B MS Sample	Sample Qualifier	Added 250 Spike Added 250 Spike	Result 261.6 LCSD Result 254.8	Qualifier LCSD Qualifier MS	mg/Kg Client Sam Unit	ple	105 ID: Lab <u>%Rec</u> 102 ient Sa	Limits 90 - 110 Control 3 Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty %Rec	ype: So <u>RPD</u> 3 Matrix 3	RPI Limi 20 Spike
Chloride Lab Sample ID: LCSD 88 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 42947 Analyte	59-A-6-B MS Sample	Sample Qualifier	Added 250 Spike Added 250	Result 261.6 LCSD Result 254.8	Qualifier C LCSD Qualifier	mg/Kg Client Sam Unit mg/Kg	D CI	105 ID: Lab %Rec 102	Limits 90 - 110 Control 3 Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty	ype: So <u>RPD</u> 3 Matrix 3	RPI Limi 20 Spike
Chloride Lab Sample ID: LCSD 88 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-2305 Matrix: Solid	59-A-6-B MS Sample Result 63.3	Qualifier	Added 250 Spike Added 250 Spike Added	Result 261.6 LCSD Result 254.8 MS Result	Qualifier LCSD Qualifier MS	mg/Kg Client Sam Unit mg/Kg	D CI	105 ID: Lab %Rec 102 ient Sa %Rec 106	Limits 90 - 110 Control 3 Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty %Rec Limits	ype: So RPD 3 Matrix ype: So ke Dup	Spike
Chloride Lab Sample ID: LCSD 88 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-2305 Matrix: Solid	59-A-6-B MS Sample <u>Result</u> 63.3 59-A-6-C MSD	Qualifier	Added 250 Spike Added 250 Spike Added	Result 261.6 LCSD Result 254.8 MS Result 328.6	Qualifier LCSD Qualifier MS	mg/Kg Client Sam Unit mg/Kg	D CI	105 ID: Lab %Rec 102 ient Sa %Rec 106	Limits 90 - 110 Control 3 Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty %Rec Limits 90 - 110	ype: So RPD 3 Matrix ype: So ke Dup	Spike
Chloride Lab Sample ID: LCSD 88 Matrix: Solid Analysis Batch: 42947 Analyte Chloride Lab Sample ID: 880-2305	59-A-6-B MS Sample <u>Result</u> 63.3 59-A-6-C MSD Sample	Qualifier	Added 250 Spike Added 250 Spike Added 250	Result 261.6 LCSD Result 254.8 MS Result 328.6	Qualifier LCSD Qualifier MS Qualifier	mg/Kg Client Sam Unit mg/Kg	D CI	105 ID: Lab %Rec 102 ient Sa %Rec 106	Limits 90 - 110 O Control 3 Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty %Rec Limits 90 - 110 Matrix Spil Prep Ty	ype: So RPD 3 Matrix ype: So ke Dup	Spike

Page 49 of 244

# **QC** Association Summary

**Client: Ensolum** Project/Site: SEMU EUMONT #117 Job ID: 890-3712-1 SDG: 03D2057041

### **GC VOA**

### Prep Batch: 42894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42894/5-A	Method Blank	Total/NA	Solid	5035	
Prep Batch: 42898					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3712-1	SS05	Total/NA	Solid	5035	
MB 880-42898/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42898/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42898/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23052-A-81-B MS	Matrix Spike	Total/NA	Solid	5035	
880-23052-A-81-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
Analysis Batch: 4293	3				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3712-1	SS05	Total/NA	Solid	8021B	42898
MB 880-42894/5-A	Method Blank	Total/NA	Solid	8021B	42894
MB 880-42898/5-A	Method Blank	Total/NA	Solid	8021B	42898

Solid

Solid

Solid

Solid

8021B

8021B

8021B

8021B

### Analysis Batch: 43060

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3712-1	SS05	Total/NA	Solid	Total BTEX	

Total/NA

Total/NA

Total/NA

Total/NA

### GC Semi VOA

LCS 880-42898/1-A

LCSD 880-42898/2-A

880-23052-A-81-B MS

880-23052-A-81-C MSD

#### Analysis Batch: 42937

Lab Sample ID 890-3712-1	Client Sample ID	Prep Type Total/NA	Matrix	Method 8015B NM	Prep Batch 42996
MB 880-42996/1-A	Method Blank	Total/NA	Solid	8015B NM	42996
LCS 880-42996/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42996
LCSD 880-42996/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42996
880-23059-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	42996
880-23059-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42996

#### Prep Batch: 42996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3712-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-42996/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42996/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42996/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23059-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23059-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 43068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3712-1	SS05	Total/NA	Solid	8015 NM	

5 6

8

42898

42898

42898

42898

Lab Control Sample

Matrix Spike

Lab Control Sample Dup

Matrix Spike Duplicate

# **QC Association Summary**

Client: Ensolum Project/Site: SEMU EUMONT #117

## HPLC/IC

### Leach Batch: 42865

Leach Batch: 42865						
_						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-3712-1	SS05	Soluble	Solid	DI Leach		E
MB 880-42865/1-A	Method Blank	Soluble	Solid	DI Leach		5
LCS 880-42865/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
LCSD 880-42865/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
880-23059-A-6-B MS	Matrix Spike	Soluble	Solid	DI Leach		
880-23059-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach		

### Analysis Batch: 42947

Analysis Batch: 4294	7					8
Lab Sample ID 890-3712-1	Client Sample ID SS05	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 42865	9
MB 880-42865/1-A	Method Blank	Soluble	Solid	300.0	42865	
LCS 880-42865/2-A	Lab Control Sample	Soluble	Solid	300.0	42865	10
LCSD 880-42865/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42865	
880-23059-A-6-B MS	Matrix Spike	Soluble	Solid	300.0	42865	11
880-23059-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	42865	

#### Job ID: 890-3712-1 SDG: 03D2057041

Initial

Amount

5.01 g

5 mL

10.02 g

1 uL

5.02 g

Final

Amount

5 mL

5 mL

10 mL

1 uL

50 mL

Batch

42898

42933

43060

43068

42996

42937

42865

42947

Number

Dil

1

1

1

1

1

Factor

Run

### Client Sample ID: SS05 Date Collected: 12/22/22 10:10 Date Received: 12/27/22 13:31

Batch

Туре

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Leach

Prep

Job ID: 890-3712-1 SDG: 03D2057041

Page 52 of 244

# Lab Sample ID: 890-3712-1

Analyst

MNR

Prepared

or Analyzed

12/29/22 13:35

12/31/22 21:28 AJ

01/03/23 09:47 AJ

01/03/23 10:37 SM

12/30/22 15:05 DM

12/31/22 07:52 SM

12/29/22 10:48 KS

12/31/22 02:28 CH

Matrix: Solid

Lab

EET MID

Laboratory References:

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Soluble

Soluble

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

Batch

5035

8021B

Total BTEX

8015NM Prep

8015 NM

8015B NM

DI Leach

300.0

Method

Eurofins Carlsbad

**Accreditation/Certification Summary** 

Client: Ensolum Project/Site: SEMU EUMONT #117 Job ID: 890-3712-1 SDG: 03D2057041

### Laboratory: Eurofins Midland

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

uthority	Pro	ogram	Identification Number	Expiration Date
exas	NE	LAP	T104704400-22-25	06-30-23
The following applytor	are included in this repo	rt but the leberatory is r	at partified by the governing outbority	This list may include analytes for whis
the agency does not o	•	rt, but the laboratory is r	ior certilied by the governing authority.	This list may include analytes for whic
• •	•	Matrix	Analyte	This list may include analytes for which
the agency does not o	ffer certification.			

**Eurofins Carlsbad** 

10

Released to Imaging: 2/20/2023 2:06:44 PM

## **Method Summary**

Client: Ensolum Project/Site: SEMU EUMONT #117 Job ID: 890-3712-1 SDG: 03D2057041

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

Page 55 of 244

Client: Ensolum Project/Site: SEMU EUMONT #117

Job ID: 890-3712-1
SDG: 03D2057041

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3712-1	SS05	Solid	12/22/22 10:10	12/27/22 13:31	0.2

Houston, TX (281) 240-4200, Datas, TX (214) 902-000 Midded, TX (281) 240-4200, Datas, TX (214) 902-000 EL Paco, TX (215) 908-334 EL Paco, TX (215) 908-3334 EL Paco, TX (215) 908-3199       Hadlie Green Ensolum, LLC     Bill (c) (If different) Carlsbad, NM (575) 908-3199     Kalei Jannings Ensolum, LLC     Program       SEMU EUMONT #117     Company Name: 0302057041     Email: hgree(Mecisolum, com, klennlings@ensolum.com, Unit and Falcomata     Tum Around The abi, If received by 4 30pm the abi, If received the abi, If received the abi, If received the abi, If rece	Entities   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) 794-1295     Hobbs, NM (575) 982-7550, Carlsbad, NM (575) 988-3199     Bill to: (If different)   Kalei Jannings     Company Name:   Ensolum, LLC     Address:   3122 Nat1 Parks Highway     Gity, State ZIP:   Carlsbad, NM 88220     Psr.   Carlsbad, NM 88220     Psr.   Carlsbad, NM 88220     Pres.   Carlsbad, NM 88220     Pres.   Carlsbad, NM 88220     Parameter ID:   TN/N, bo, 7     Imperature Reading:   1. Y     Imperature Reading:   1. Y     Part   Comp     Comp   Cont     Bill to:   Grabb     Part   ANALYSIS     Address:   Sampled     Torrected Temperature:   C. C. A     Part   Comp     Comp   Cont     Et   Bill to Comp     Cont   Et     Address   X     Sampled   Depth     Comp   Cont     Et   Bill to Cont     Et   Bill to Cont     Address   X     Comp   Cont <t< th=""></t<>
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, Carisbad, NM (575) 988-3199       Address:     3122 Nat'l Parks Highway       City, State ZIP:     Carisbad, NM 88220       In Around     Carisbad, NM 88220       In Rush     Code       In Robin     Recode       In Robin     Rec	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300       Midland, TX (32) 704-5440, San Antonio, TX (210) 509-3334       EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296       Hobbs, NM (575) 392-7550, Carisbad, NM (575) 988-3199       Address:     3122 Natl Parks Highway       City, State ZIP;     Carlsbad, NM 88220       Indreen@ensolum.com, kjennings@ensolum.com       Pres.     Carlsbad, NM 88220       Indreen@ensolum.com, kjennings@ensolum.com       Pres.     Carlsbad, NM 88220       Indreen@ensolum.com, kjennings@ensolum.com       Parameters     ANALYSIS REO       Ves No     Parameters       Ves No     Parameters       Asgo-3712 Chain     B90-3712 Chain       Born Depth     Cont     TPH       City     X     X       City     X     X       Asgo-3712 Chain     B90-3712 Chain
ANALYSIS REQ 890-3712 Chain	ANALYSIS REQ
ANALYSIS REQ	ANALYSIS REQ
Project Name   Trust Bills   Bills (   Games   Kennon Trusting   Monto	Work Order No:     Page       www.xenco.com     Page       Program: UST/PST     PRP       Reporting: Level II     Level III       Deliverables: EDD     ADaPT       Deliverables: EDD     ADaPT       Other:     Other:       Deliverables: EDD     ADaPT       Cool: Cool     Other:       HSO:: H2     H2       HSO:: H2     H2       H3:: Of Custody     None: NO       Chain of Custody     Na       Sample Con       Na     Na       Na     Na       None: No     Na       Na

12 13

Chain of Custody

## Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 3712 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

<6mm (1/4").

#### Login Number: 3712 List Number: 2 Creator: Teel, Brianna

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

Job Number: 890-3712-1 SDG Number: 03D2057041 List Source: Eurofins Midland 5 6 7 8 9 10 11 12 13 List Creation: 12/29/22 11:42 AM

14

Received by OCD: 2/2/2023 9:39:03 AM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Hadlie Green Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 1/16/2023 10:14:21 AM Revision 1

# JOB DESCRIPTION

SEMU EUMONT #117 SDG NUMBER 03D2057041

# **JOB NUMBER**

890-3713-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

# **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

ly Taylor

Generated 1/16/2023 10:14:21 AM Revision 1

Authorized for release by Holly Taylor, Project Manager Holly.Taylor@et.eurofinsus.com Designee for 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

Laboratory Job ID: 890-3713-1

SDG: 03D2057041

# **Table of Contents**

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	7
	8
	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receipt Checklists	19

Client: Ensolum Project/Site: SEMU EUMONT #117

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 VC	A
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.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.
HPLC/IC	
Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
<b>n</b>	Listed under the "D" solumn to designate that the result is reported on a dry weight basis

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

Job ID: 890-3713-1

SDG: 03D2057041

## **Case Narrative**

### Job ID: 890-3713-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-3713-1

#### Revision

The report being provided is a revision of the original report sent on 1/3/2023. The report (revision 1) is being revised to change the sample ID per Hadlie Green (email).

#### Receipt

The sample was received on 12/27/2022 1:34 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 was 1.2° C.

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS04 (890-3713-1).

#### GC VOA

Method 8021B: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-42898 and analytical batch 880-42933. The associated laboratory control sample (LCS) met acceptance criteria.

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

#### GC Semi VOA

Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-42937/32), (CCV 880-42937/48), (CCV 880-42937/59) and (LCSD 880-42996/3-A). Evidence of matrix interferences is not obvious.

Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (880-23059-A-1-F MS) and (880-23059-A-1-G MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015B NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-42996 and analytical batch 880-42937 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 8015B NM: CCV biased high for diesel range hydrocarbons, however an acceptable CCV was analyzed within the 12 hour window, therefore data was qualified and reported. (CCV 880-42937/48)

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

#### **General Chemistry**

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

#### **Organic Prep**

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

#### **VOA Prep**

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

## **Client Sample Results**

Client: Ensolum Project/Site: SEMU EUMONT #117

#### Client Sample ID: SS04 Date Collected: 12/22/22 10:05 Date Received: 12/27/22 13:34 Sample Depth: 0.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		12/29/22 13:35	12/31/22 21:49	1
Toluene	<0.00201	U	0.00201	mg/Kg		12/29/22 13:35	12/31/22 21:49	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		12/29/22 13:35	12/31/22 21:49	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		12/29/22 13:35	12/31/22 21:49	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		12/29/22 13:35	12/31/22 21:49	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		12/29/22 13:35	12/31/22 21:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			12/29/22 13:35	12/31/22 21:49	1
1,4-Difluorobenzene (Surr)	110		70 - 130			12/29/22 13:35	12/31/22 21:49	1
Method: TAL SOP Total B	FEX - Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00402	U	0.00402	mg/Kg			01/03/23 09:47	1
Method: SW846 8015 NM -	Diesel Range	Organics (	DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/03/23 10:37	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/30/22 15:05	12/31/22 08:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/30/22 15:05	12/31/22 08:14	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/30/22 15:05	12/31/22 08:14	1
Surrogata	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Surrogate	/mrecovery							
1-Chlorooctane	120		70 - 130			12/30/22 15:05	12/31/22 08:14	1
	·	<u> </u>	70 - 130 70 - 130				12/31/22 08:14 12/31/22 08:14	1 1
1-Chlorooctane	120 113	omatogra	70 - 130					1

5.05

mg/Kg

<5.05 U

12/31/22 03:05

1

5

Job ID: 890-3713-1 SDG: 03D2057041

# Lab Sample ID: 890-3713-1

Matrix: Solid

Chloride

## **Surrogate Summary**

**Client: Ensolum** Project/Site: SEMU EUMONT #117

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

			Percent Surrogate Recovery (Acceptance Li	nits)
		BFB1	)FBZ1	
Lab Sample ID	Client Sample ID	(70-130)	70-130)	
880-23052-A-81-B MS	Matrix Spike	99	110	
880-23052-A-81-C MSD	Matrix Spike Duplicate	102	111	
890-3713-1	SS04	100	110	
LCS 880-42898/1-A	Lab Control Sample	98	108	
LCSD 880-42898/2-A	Lab Control Sample Dup	97	110	
MB 880-42894/5-A	Method Blank	94	104	
MB 880-42898/5-A	Method Blank	94	108	
Surrogate Legend				

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

			Percent Su	rrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		13
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		IJ
880-23059-A-1-F MS	Matrix Spike	53 S1-	46 S1-		
880-23059-A-1-G MSD	Matrix Spike Duplicate	68 S1-	60 S1-		
890-3713-1	SS04	120	113		
LCS 880-42996/2-A	Lab Control Sample	106	118		
LCSD 880-42996/3-A	Lab Control Sample Dup	119	132 S1+		
MB 880-42996/1-A	Method Blank	115	127		

#### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Job ID: 890-3713-1 SDG: 03D2057041

Page 65 of 244

Prep Type: Total/NA

Prep Type: Total/NA

**Eurofins Carlsbad** 

Client: Ensolum Project/Site: SEMU EUMONT #117

Lab Sample ID: MB 880-42894/5-A

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

Matrix: Solid Analysis Batch: 42933							Prep Type: To Prep Batch:	
-	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/29/22 13:11	12/31/22 01:40	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			12/29/22 13:11	12/31/22 01:40	1
1,4-Difluorobenzene (Surr)	104		70 - 130			12/29/22 13:11	12/31/22 01:40	1
Lab Sample ID: MB 880-42 Matrix: Solid	898/5-A						le ID: Methoo Prep Type: To	

# Analysis Batch: 42933

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/29/22 13:35	12/31/22 13:19	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			12/29/22 13:35	12/31/22 13:19	1
1,4-Difluorobenzene (Surr)	108		70 - 130			12/29/22 13:35	12/31/22 13:19	1

#### Lab Sample ID: LCS 880-42898/1-A Matrix: Solid Analysis Batch: 42933

42898

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

Lab Sample ID: LCSD 880-42898/2-A			C	Client Sa	mple	ID: Lat	Control	Sample	e Dup
Matrix: Solid							Prep Ty	pe: Tot	al/NA
Analysis Batch: 42933							Prep B	atch:	42898
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09527		mg/Kg		95	70 - 130	14	35

Eurofins Carlsbad

Page 66 of 244

Job ID: 890-3713-1

SDG: 03D2057041

Prep Batch: 42898

Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

**Client Sample ID: Method Blank** 

#### Released to Imaging: 2/20/2023 2:06:44 PM

Client: Ensolum Project/Site: SEMU EUMONT #117 Page 67 of 244

**Client Sample ID: Matrix Spike** 

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

Prep Type: Total/NA Prep Batch: 42898

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

Lab Sample ID: LCSD 880-42898/2-A Matrix: Solid Analysis Batch: 42933			C	Client Sa	mple	ID: Lat	Control Prep Ty Prep E		al/NA
-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.08669		mg/Kg		87	70 - 130	13	35
Ethylbenzene	0.100	0.08293		mg/Kg		83	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.1683		mg/Kg		84	70 - 130	13	35
o-Xylene	0.100	0.08294		mg/Kg		83	70 - 130	12	35
LCSD LCS	D								

	LUSD	LUSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

#### Lab Sample ID: 880-23052-A-81-B MS Matrix: Solid Analysis Batch: 42933

Analysis Batch: 42933									Prep Batch: 42898
	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130
Toluene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130
Ethylbenzene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130
m-Xylene & p-Xylene	<0.00403	U F1	0.198	<0.00396	U F1	mg/Kg		0	70 - 130
o-Xylene	<0.00202	U F1	0.0990	<0.00198	U F1	mg/Kg		0.4	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

#### Lab Sample ID: 880-23052-A-81-C MSD Matrix: Solid Analysis Batch: 42933

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
Toluene	<0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
Ethylbenzene	<0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
m-Xylene & p-Xylene	<0.00403	U F1	0.198	<0.00397	U F1	mg/Kg		0	70 - 130	NC	35
o-Xylene	<0.00202	U F1	0.0992	<0.00198	U F1	mg/Kg		0.4	70 - 130	8	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	102		70 - 130								

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

111

Lab Sample ID: MB 880-42996/1 Matrix: Solid Analysis Batch: 42937	A						le ID: Method Prep Type: To Prep Batch:	otal/NA
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/30/22 15:05	12/31/22 00:12	1

70 - 130

Eurofins Carlsbad

5

7

1,4-Difluorobenzene (Surr)

Client: Ensolum Project/Site: SEMU EUMONT #117

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

Lab Sample ID: MB 880-429 Matrix: Solid	996/1-A							Clie	ent Samp	ole ID: M Prep Ty		
Analysis Batch: 42937												42996
Analysis Baton. 42007		MB MB								i i cp i	Juton.	42000
Analyte		sult Qualifier	RL		Uni	t	D	Р	repared	Analy	zed	Dil Fac
Diesel Range Organics (Over		0.0 U			<u></u>		_		30/22 15:05			1
C10-C28)						-5						
Oll Range Organics (Over C28-C36	6) <5	0.0 U	50.0		mg/	Kg		12/3	30/22 15:05	12/31/22	00:12	1
		MB MB										
Surrogata		ery Qualifier	Limits						Prepared	Analy		Dil Fac
Surrogate 1-Chlorooctane		115 <b>Quaimer</b>							30/22 15:05	Analy		1 Dii Fac
o-Terphenyl		127	70 - 130 70 - 130						30/22 15:05 30/22 15:05			1
		121	70-150					12/3	0/22 10.00	12/51/22	00.12	,
Lab Sample ID: LCS 880-42	2996/2-A					Cli	ent	Sai	mple ID:	Lab Co	ntrol S	ample
Matrix: Solid										Prep Ty		
Analysis Batch: 42937												42996
-			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics			1000	942.2		mg/Kg			94	70 - 130		
(GRO)-C6-C10			100-									
Diesel Range Organics (Over			1000	1120		mg/Kg			112	70 - 130		
C10-C28)												
	LCS	LCS										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	106		70 - 130									
o-Terphenyl	118		70 - 130									
Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 42937	42990/3-A					Client 5	arr	ipie	ID: Lab	Prep Ty	pe: To	
			Spike	LCSD	LCSD					%Rec		RPD
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	1025		mg/Kg			103	70 - 130	8	20
(GRO)-C6-C10			1000	1050		malla			106	70 120	10	20
Diesel Range Organics (Over C10-C28)			1000	1258		mg/Kg			126	70 - 130	12	20
010 020)												
	LCSD											
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	119	C1.	70 - 130 70 - 130									
o-Terphenyl	132	57+	70 - 130									
- Lab Sample ID: 880-23059-	Δ.1.F MS							C	lient San		Matrix	Spike
Matrix: Solid										Prep Ty		-
Analysis Batch: 42937												42996
Analysis Baten: 42007	Sample	Sample	Spike	MS	MS					%Rec	Jacon.	42000
Analyte		Qualifier	Added		Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9		999	958.3		mg/Kg			91	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2	999	534.1	F1	mg/Kg			51	70 - 130		
,												
	MS	M/S										
Curre mete			l incite									
Surrogate 1-Chlorooctane	%Recovery 53	Qualifier	Limits									

Job ID: 890-3713-1 SDG: 03D2057041

Eurofins Carlsbad

o-Terphenyl

70 - 130

46 S1-

Job ID: 890-3713-1

SDG: 03D2057041

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

Matrix: Solid									Prep Ty		
Analysis Batch: 42937	0	Commis	Omilia	MOD	MOD					Batch: 4	
Analyta	•	Sample Qualifier	Spike Added	-	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPI Limi
Analyte Gasoline Range Organics	- Kesult <49.9		999	981.9	Quaimer	Unit		94	70 - 130	2	2
(GRO)-C6-C10	\$49.9	0	999	901.9		mg/Kg		94	70 - 130	2	2
Diesel Range Organics (Over	<49.9	U F1 F2	999	708.7	F1 F2	mg/Kg		69	70 - 130	28	2
C10-C28)											
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	68	S1-	70 - 130								
o-Terphenyl	60	S1-	70 - 130								
Lab Sample ID: MB 880-4 Matrix: Solid Analysis Batch: 42948	2868/1-A						Clie	ent Sam	ple ID: M Prep Ty		
Analyte	Ba	MB MB sult Qualifier		RL	Unit	D	Б	repared	Analyz	rod l	Dil Fa
Chloride				5.00	mg/K			repareu	$-\frac{A11a1y2}{12/31/22}$		
			Spike	LCS	LCS				%Rec	ype: Sc	
Analysis Batch: 42948 Analyte			Added	-	LCS Qualifier	Unit	D	%Rec			
Analysis Batch: 42948			•	-		Unit mg/Kg	_ <u>D</u>	<b>%Rec</b>	%Rec		
Analysis Batch: 42948 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid	0-42868/3-A		Added	Result	Qualifier	mg/Kg		106	%Rec Limits	 Sample	 թ Dւ
Analysis Batch: 42948 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid	0-42868/3-A		Added	Result 263.9	Qualifier	mg/Kg		106	%Rec Limits 90 - 110	 Sample	e Du blub
Analysis Batch: 42948 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42948	0-42868/3-A		Added250	Result 263.9 LCSD	Qualifier	mg/Kg		106	%Rec Limits 90 - 110 Control 9 Prep Ty	 Sample	e Du blub RF
Analysis Batch: 42948 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42948 Analyte	0-42868/3-A		Added 250 Spike	Result 263.9 LCSD	Qualifier C	mg/Kg Client San	nple	106	%Rec Limits 90 - 110 Control 9 Prep Ty %Rec	Sample ype: Sc	e Du blub RF Lin
Analysis Batch: 42948 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42948 Analyte Chloride Lab Sample ID: 890-3713- Matrix: Solid			Added 250 Spike Added	Result 263.9 LCSD Result	Qualifier C	mg/Kg Client San Unit	nple	106 ID: Lab %Rec 102	%Rec Limits 90 - 110 Control 9 Prep Ty %Rec Limits	Sample ype: Sc <u>RPD</u> 3 ple ID:	e Du blub RF Lin SSC
Analysis Batch: 42948 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42948 Analyte Chloride Lab Sample ID: 890-3713 Matrix: Solid	-1 MS		Added 250 Spike Added 250	Result 263.9 LCSD Result 256.2	Qualifier C LCSD Qualifier	mg/Kg Client San Unit	nple	106 ID: Lab %Rec 102	%Rec Limits 90 - 110 Control 9 Prep Ty %Rec Limits 90 - 110	Sample ype: Sc <u>RPD</u> 3 ple ID:	e Du blub RP Lim 2 SS0
Matrix: Solid Analysis Batch: 42948 Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42948 Chloride Lab Sample ID: 890-3713 Matrix: Solid Analysis Batch: 42948	-1 MS Sample	Sample	Added 250 Spike Added 250 Spike	Result 263.9 LCSD Result 256.2	Qualifier C LCSD Qualifier MS	mg/Kg Client San Unit mg/Kg	nple	106 ID: Lab %Rec 102	%Rec Limits 90 - 110 Control 9 Prep Ty %Rec Limits 90 - 110 lient Sam Prep Ty %Rec	Sample ype: Sc <u>RPD</u> 3 ple ID:	e Du blub RP Lim 2 SS0
Analysis Batch: 42948 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42948 Analyte Chloride Lab Sample ID: 890-3713- Matrix: Solid Analysis Batch: 42948 Analyte	-1 MS Sample Result	Qualifier	Added 250 Spike Added 250 Spike Added	Result 263.9 LCSD Result 256.2 MS Result	Qualifier C LCSD Qualifier	mg/Kg Client San Unit mg/Kg	nple	106 ID: Lab %Rec 102 C	%Rec Limits 90 - 110 O Control S Prep Ty %Rec Limits 90 - 110 lient Sam Prep Ty %Rec Limits	Sample ype: Sc <u>RPD</u> 3 ple ID:	e Du blub RF Lin
Analysis Batch: 42948 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42948 Analyte Chloride Lab Sample ID: 890-3713 Matrix: Solid Analyte Chloride Lab Sample ID: 890-3713 Matrix: Solid	-1 MS Sample <u>Result</u> <5.05 -1 MSD	Qualifier U	Added 250 Spike Added 250 Spike Added 253	Result 263.9 LCSD Result 256.2 MS Result 266.0	Qualifier LCSD Qualifier MS Qualifier	mg/Kg Client San Unit mg/Kg	nple	106 ID: Lab %Rec 102 C %Rec 105	%Rec Limits 90 - 110 Control 9 Prep Ty %Rec Limits 90 - 110 lient Sam Prep Ty %Rec Limits 90 - 110	Sample ype: So <u>RPD</u> 3 ple ID: ype: So ple ID:	e Du blub RF Lin SSC blub
Analysis Batch: 42948 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 42948 Analyte Chloride Lab Sample ID: 890-3713- Matrix: Solid Analysis Batch: 42948	-1 MS Sample Result <5.05 -1 MSD Sample	Qualifier	Added 250 Spike Added 250 Spike Added	Result 263.9 LCSD Result 256.2 MS Result 266.0	Qualifier C LCSD Qualifier MS	mg/Kg Client San Unit mg/Kg	nple	106 ID: Lab %Rec 102 C %Rec 105	%Rec Limits 90 - 110 Control 9 Prep Ty %Rec Limits 90 - 110 lient Sam 90 - 110	Sample ype: So <u>RPD</u> 3 ple ID: ype: So ple ID:	e Du Diub RF Lin SSC Diub

# **QC Association Summary**

Client: Ensolum Project/Site: SEMU EUMONT #117 Job ID: 890-3713-1 SDG: 03D2057041

8021B

8021B

8021B

8021B

### **GC VOA**

### Prep Batch: 42894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42894/5-A	Method Blank	Total/NA	Solid	5035	
Prep Batch: 42898					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3713-1	SS04	Total/NA	Solid	5035	
MB 880-42898/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42898/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42898/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23052-A-81-B MS	Matrix Spike	Total/NA	Solid	5035	
880-23052-A-81-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
Analysis Batch: 4293	3				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3713-1	SS04	Total/NA	Solid	8021B	42898
MB 880-42894/5-A	Method Blank	Total/NA	Solid	8021B	42894
MB 880-42898/5-A	Method Blank	Total/NA	Solid	8021B	42898

Anal	vsis	<b>Batch:</b>	43061
	,		

Lab Control Sample

Matrix Spike

Lab Control Sample Dup

Matrix Spike Duplicate

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3713-1	SS04	Total/NA	Solid	Total BTEX	

Total/NA

Total/NA

Total/NA

Total/NA

Solid

Solid

Solid

Solid

### GC Semi VOA

LCS 880-42898/1-A

LCSD 880-42898/2-A

880-23052-A-81-B MS

880-23052-A-81-C MSD

#### Analysis Batch: 42937

Lab Sample ID 890-3713-1	Client Sample ID	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 42996
MB 880-42996/1-A	Method Blank	Total/NA	Solid	8015B NM	42996
LCS 880-42996/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42996
LCSD 880-42996/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42996
880-23059-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	42996
880-23059-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42996

#### Prep Batch: 42996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3713-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-42996/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42996/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42996/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23059-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23059-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 43069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3713-1	SS04	Total/NA	Solid	8015 NM	

5

8

42898

42898

42898

42898

# **QC Association Summary**

Client: Ensolum Project/Site: SEMU EUMONT #117

## HPLC/IC

### Leach Batch: 42868

Leach Batch: 42868						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-3713-1	SS04	Soluble	Solid	DI Leach		
MB 880-42868/1-A	Method Blank	Soluble	Solid	DI Leach		
LCS 880-42868/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
_CSD 880-42868/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
890-3713-1 MS	SS04	Soluble	Solid	DI Leach		
890-3713-1 MSD	SS04	Soluble	Solid	DI Leach		

### Analysis Batch: 42948

Analysis Batch: 42948							
Lab Sample ID 890-3713-1	Client Sample ID SS04	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 42868	9	
MB 880-42868/1-A	Method Blank	Soluble	Solid	300.0	42868		
LCS 880-42868/2-A	Lab Control Sample	Soluble	Solid	300.0	42868		
LCSD 880-42868/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42868		
890-3713-1 MS	SS04	Soluble	Solid	300.0	42868		
890-3713-1 MSD	SS04	Soluble	Solid	300.0	42868		

Job ID: 890-3713-1 SDG: 03D2057041

Page 71 of 244

**Eurofins Carlsbad** 

Initial

Amount

4.97 g

5 mL

10.00 g

1 uL

4.95 g

Final

Amount

5 mL

5 mL

10 mL

1 uL

50 mL

Batch

42898

42933

43061

43069

42996

42937

42868

42948

Number

Dil

1

1

1

1

1

Factor

Run

### Client Sample ID: SS04 Date Collected: 12/22/22 10:05 Date Received: 12/27/22 13:34

Batch

Туре

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Leach

Prep

. ID. 00	<u>,                                    </u>	10 1	

Page 72 of 244

Job ID: 890-3713-1 SDG: 03D2057041

# Lab Sample ID: 890-3713-1

Analyst

Prepared

or Analyzed

12/29/22 13:35 MNR

12/31/22 21:49 AJ

01/03/23 09:47 AJ

01/03/23 10:37 SM

12/30/22 15:05 DM

12/31/22 08:14 SM

12/29/22 10:52 KS

12/31/22 03:05 CH

Matrix: Solid

Lab

EET MID

Laboratory References:

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Soluble

Soluble

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

Batch

5035

8021B

Total BTEX

8015NM Prep

8015 NM

8015B NM

DI Leach

300.0

Method

Eurofins Carlsbad
**Accreditation/Certification Summary** 

Client: Ensolum Project/Site: SEMU EUMONT #117 Job ID: 890-3713-1 SDG: 03D2057041

### 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
exas	NE	LAP	T104704400-22-25	06-30-23
The following analytes	are included in this repo	rt, but the laboratory is r	not certified by the governing authority.	This list may include analytes for which
the agency does not o	•		ior certified by the governing autionty.	This list may mondee analytes for white
0,	•	Matrix	Analyte	
the agency does not o	ffer certification.			

**Eurofins Carlsbad** 

10

# **Method Summary**

Client: Ensolum Project/Site: SEMU EUMONT #117 Job ID: 890-3713-1 SDG: 03D2057041

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

Page 75 of 244

Client: Ensolum Project/Site: SEMU EUMONT #117

Job ID: 890-3713-1
SDG: 03D2057041

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3713-1	SS04	Solid	12/22/22 10:05	12/27/22 13:34	0.2

gs       gs
A. TX (281) 240-4300. Dalles, TX (214) 902-0300     Work Order NO:
Work Order No         www.xenco.com         Work Ords         Program: UST/PST       PRP       Brow         State of Project::       NM       Project::       NM         Peliverables:       EDD       Image: Index of Index of Index of Index of Index on Index of Index on Index

Page 76 of 244

Chain of Custody

# Login Sample Receipt Checklist

Client: Ensolum

### Login Number: 3713 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	

Job Number: 890-3713-1 SDG Number: 03D2057041

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

### Login Number: 3713 List Number: 2 Creator: Teel, Brianna

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

Job Number: 890-3713-1 SDG Number: 03D2057041

List Source: Eurofins Midland

List Creation: 12/29/22 11:42 AM

Received by OCD: 2/2/2023 9:39:03 AM



**Environment Testing** 

# ANALYTICAL REPORT

# PREPARED FOR

Attn: Hadlie Green Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 1/16/2023 10:09:31 AM Revision 1

# JOB DESCRIPTION

SEMU EUMONT #117 SDG NUMBER 03D2057041

# **JOB NUMBER**

890-3714-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

# **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

ly Taylor

Generated 1/16/2023 10:09:31 AM Revision 1

Authorized for release by Holly Taylor, Project Manager Holly.Taylor@et.eurofinsus.com Designee for 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

# **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

-	D: 2/2/2023 9:39:03 AM	Page 82 of 2	
	Definitions/Glossary		
Client: Ensolu		Job ID: 890-3714-1	
Project/Site: S	SEMU EUMONT #117	SDG: 03D2057041	
Qualifiers			3
GC VOA			
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VO	Α		5
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.		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		8
HPLC/IC			
Qualifier	Qualifier Description		9
0	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		13
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac			
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 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

Practical Quantitation Limit PQL PRES

Presumptive **Quality Control** QC

Relative Error Ratio (Radiochemistry) RER Reporting Limit or Requested Limit (Radiochemistry) RL

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

TEF Toxicity Equivalent Factor (Dioxin)

TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

# **Case Narrative**

### Job ID: 890-3714-1

### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-3714-1

### Revision

The report being provided is a revision of the original report sent on 1/4/2023. The report (revision 1) is being revised to change the sample ID per Hadlie Green (email).

### Receipt

The sample was received on 12/27/2022 1:34 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 was 1.2° C.

### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS03 (890-3714-1).

### GC VOA

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

### GC Semi VOA

Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-42937/32), (CCV 880-42937/48), (CCV 880-42937/59) and (LCSD 880-42996/3-A). Evidence of matrix interferences is not obvious.

Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (880-23059-A-1-F MS) and (880-23059-A-1-G MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015B NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-42996 and analytical batch 880-42937 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 8015B NM: CCV biased high for diesel range hydrocarbons, however an acceptable CCV was analyzed within the 12 hour window, therefore data was qualified and reported. (CCV 880-42937/48)

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

### **General Chemistry**

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

### **Organic Prep**

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

#### **VOA Prep**

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

# **Client Sample Results**

Client: Ensolum Project/Site: SEMU EUMONT #117

### Client Sample ID: SS03 Date Collected: 12/22/22 10:00 Date Received: 12/27/22 13:34 Sample Depth: 0.2

Job ID: 890-3714-1
SDG: 03D2057041

# Lab Sample ID: 890-3714-1

Matrix: Solid

Page 84 of 244

Method: SW846 8021B - Volat	tile Organic	Compound	ds (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/30/22 11:33	01/03/23 20:08	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/30/22 11:33	01/03/23 20:08	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		12/30/22 11:33	01/03/23 20:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		12/30/22 11:33	01/03/23 20:08	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		12/30/22 11:33	01/03/23 20:08	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		12/30/22 11:33	01/03/23 20:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			12/30/22 11:33	01/03/23 20:08	1
1,4-Difluorobenzene (Surr)	111		70 - 130			12/30/22 11:33	01/03/23 20:08	1
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/04/23 09:17	1
Method: SW846 8015 NM - Di	esel Range	Organics (	DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/03/23 10:37	1
	Diesel Range	e Organics	(DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/30/22 15:05	12/31/22 08:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/30/22 15:05	12/31/22 08:37	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/30/22 15:05	12/31/22 08:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130			12/30/22 15:05	12/31/22 08:37	1
o-Terphenyl	89		70 - 130			12/30/22 15:05	12/31/22 08:37	1
Method: MCAWW 300.0 - Anio	ons, Ion Chr	omatogra	ohy - Soluble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.97	U	4.97	mg/Kg			12/31/22 03:19	1

Eurofins Carlsbad

Released to Imaging: 2/20/2023 2:06:44 PM

# **Surrogate Summary**

Client: Ensolum Project/Site: SEMU EUMONT #117

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

			Percer	nt Surrogate Recovery (Acceptance Limit	ts)
		BFB1	DFBZ1		
Sample ID	Client Sample ID	(70-130)	(70-130)		
59-A-1-B MS	Matrix Spike	101	110		
3059-A-1-C MSD	Matrix Spike Duplicate	97	104		
14-1	SS03	106	111		
80-42941/1-A	Lab Control Sample	93	107		
380-42941/2-A	Lab Control Sample Dup	97	109		
80-42941/5-A	Method Blank	97	107		

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid		•		Prep Type: Total/NA	
			Percent Surroga	te Recovery (Acceptance Limits)	
		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-23059-A-1-F MS	Matrix Spike	53 S1-	46 S1-		13
880-23059-A-1-G MSD	Matrix Spike Duplicate	68 S1-	60 S1-		
890-3714-1	SS03	91	89		
LCS 880-42996/2-A	Lab Control Sample	106	118		
LCSD 880-42996/3-A	Lab Control Sample Dup	119	132 S1+		
MB 880-42996/1-A	Method Blank	115	127		

### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

SDG: 03D2057041

Job ID: 890-3714-1

Prep Type: Total/NA

Page 85 of 244

Lab Sample ID: MB 880-42941/5-A

**Matrix: Solid** 

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

Analysis Batch: 43042							Prep Batch:	42941
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200	mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/30/22 11:33	01/03/23 12:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/30/22 11:33	01/03/23 12:23	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/30/22 11:33	01/03/23 12:23	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130			12/30/22 11:33	01/03/23 12:23	1
1,4-Difluorobenzene (Surr)	107		70 - 130			12/30/22 11:33	01/03/23 12:23	1

### Lab Sample ID: LCS 880-42941/1-A Matrix: Solid Analysis Batch: 43042

Analysis Batch: 43042							Prep B	atch: 42941
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09341		mg/Kg		93	70 - 130	
Toluene	0.100	0.08875		mg/Kg		89	70 - 130	
Ethylbenzene	0.100	0.08816		mg/Kg		88	70 - 130	
m-Xylene & p-Xylene	0.200	0.1815		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.08693		mg/Kg		87	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

### Lab Sample ID: LCSD 880-42941/2-A Matrix: Solid

### Analysis Batch: 43042

Analysis Batch: 43042							Prep E	-	
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09507		mg/Kg		95	70 - 130	2	35
Toluene	0.100	0.09079		mg/Kg		91	70 - 130	2	35
Ethylbenzene	0.100	0.08995		mg/Kg		90	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1856		mg/Kg		93	70 - 130	2	35
o-Xylene	0.100	0.08867		mg/Kg		89	70 - 130	2	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

### Lab Sample ID: 880-23059-A-1-B MS Matrix: Solid

Matrix: Solid Analysis Batch: 43042									Prep Type: Total/N/ Prep Batch: 4294	
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.100	0.09240		mg/Kg		92	70 - 130	_
Toluene	<0.00200	U	0.100	0.08833		mg/Kg		88	70 - 130	

### **Eurofins Carlsbad**

**Client Sample ID: Matrix Spike** 

5

7

**Prep Type: Total/NA** 

**Prep Type: Total/NA** 

**Client Sample ID: Lab Control Sample** 

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

Released	to	Imaging:	2/	20	/2023	2:0	06:44	PM

Client: Ensolum Project/Site: SEMU EUMONT #117

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

Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 43042	9-A-1-B MS						CI	ient Sa	mple ID: I Prep Ty Prep E		al/NA
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	<0.00200	U	0.100	0.08642		mg/Kg		86	70 - 130		
m-Xylene & p-Xylene	<0.00400	U	0.200	0.1791		mg/Kg		89	70 - 130		
o-Xylene	<0.00200	U	0.100	0.08531		mg/Kg		85	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	101		70 - 130								
	110		70 - 130								
1,4-Difluorobenzene (Surr)						Oliont			Intuise Onell		llaata
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 43042		)				Client S	Samp	le ID: N	latrix Spil Prep Ty Prep E		al/NA
_ Lab Sample ID: 880-2305 Matrix: Solid	9-A-1-C MSD	Sample	Spike	MSD	MSD	Client S	Samp	le ID: N	Prep Ty	pe: Tot	al/NA
Lab Sample ID: 880-2305 Matrix: Solid	9-A-1-C MSD Sample		Spike Added	-	MSD Qualifier	Client S	Samp D	le ID: N %Rec	Prep Ty Prep E	pe: Tot	al/NA 2941
Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 43042	9-A-1-C MSD Sample	Sample Qualifier	•	-					Prep Ty Prep E %Rec	pe: Tot Batch: 4	al/NA 12941 RPD
Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 43042 Analyte	9-A-1-C MSD Sample Result	Sample Qualifier	Added	Result		Unit		%Rec	Prep Ty Prep E %Rec Limits	pe: Tot Batch: 4 RPD	al/NA 2941 RPD Limit
Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 43042 Analyte Benzene	9-A-1-C MSD Sample Result <0.00200	Sample Qualifier U	Added	<b>Result</b> 0.08424		Unit mg/Kg		%Rec 85	Prep Ty Prep E %Rec Limits 70 - 130	pe: Tot Batch: 4 RPD 9	al/NA 2941 RPD Limit 35
Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 43042 Analyte Benzene Toluene	9-A-1-C MSD Sample Result <0.00200 <0.00200	Sample Qualifier U U U	Added	<b>Result</b> 0.08424 0.08064		Unit mg/Kg mg/Kg		%Rec 85 81	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130	pe: Tot Batch: 4 	al/NA 12941 RPD Limit 35 35
Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 43042 Analyte Benzene Toluene Ethylbenzene	9-A-1-C MSD Sample Result <0.00200 <0.00200 <0.00200	Sample Qualifier U U U U	Added 0.0994 0.0994 0.0994	Result 0.08424 0.08064 0.07961		Unit mg/Kg mg/Kg mg/Kg		%Rec 85 81 80	Prep Ty           Prep E           %Rec           Limits           70 - 130           70 - 130           70 - 130	pe: Tot Batch: 4 <u>RPD</u> 9 9 8	al/NA 2941 RPD Limit 35 35 35
Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 43042 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	9-A-1-C MSD Sample Result <0.00200 <0.00200 <0.00200 <0.00200 <0.00200	Sample Qualifier U U U U	Added 0.0994 0.0994 0.0994 0.199	Result 0.08424 0.08064 0.07961 0.1651		Unit mg/Kg mg/Kg mg/Kg		%Rec 85 81 80 83	Prep Ty           Prep E           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	pe: Tot Batch: 4 9 9 8 8	al/NA 2941 RPD Limit 35 35 35 35 35
Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 43042 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	9-A-1-C MSD Sample Result <0.00200 <0.00200 <0.00200 <0.00200 <0.00200	Sample Qualifier U U U U U U U MSD	Added 0.0994 0.0994 0.0994 0.199	Result 0.08424 0.08064 0.07961 0.1651		Unit mg/Kg mg/Kg mg/Kg		%Rec 85 81 80 83	Prep Ty           Prep E           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	pe: Tot Batch: 4 	al/NA 2941 RPD Limit 35 35 35 35 35
Lab Sample ID: 880-2305 Matrix: Solid Analysis Batch: 43042 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	9-A-1-C MSD Sample Result <0.00200 <0.00200 <0.00200 <0.00400 <0.00200 MSD	Sample Qualifier U U U U U U U MSD	Added 0.0994 0.0994 0.0994 0.199 0.0994	Result 0.08424 0.08064 0.07961 0.1651		Unit mg/Kg mg/Kg mg/Kg		%Rec 85 81 80 83	Prep Ty           Prep E           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	pe: Tot Batch: 4 	al/NA 2941 RPD Limit 35 35 35 35 35

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

### Lab Sample ID: MB 880-42996/1-A Matrix: Solid Analysis Batch: 42937

	MD	MD						
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/30/22 15:05	12/31/22 00:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/30/22 15:05	12/31/22 00:12	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/30/22 15:05	12/31/22 00:12	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	127		70 - 130

#### Lab Sample ID: LCS 880-42996/2-A Matrix: Solid Analysis Batch: 42937

Analysis Batch: 42937							Prep E	Batch: 42996
-	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	942.2		mg/Kg		94	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1120		mg/Kg		112	70 - 130	
C10-C28)								

**Eurofins Carlsbad** 

### **Client Sample ID: Method Blank** Prep Type: Total/NA Prep Batch: 42996

**Prep Type: Total/NA** 

1

1

12/30/22 15:05 12/31/22 00:12

12/30/22 15:05 12/31/22 00:12

**Client Sample ID: Lab Control Sample** 

**Client: Ensolum** Project/Site: SEMU EUMONT #117

Lab Sample ID: LCS 880-42996/2-A

**Matrix: Solid** 

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

**Prep Type: Total/NA** Prep Batch: 42996

Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

5
7
8
9

# **Client Sample ID: Matrix Spike**

р Т	ype: `	Total	/NA
rep	Batc	h: 42	996

Analysis Batch: 42937			
	LCS	LCS	
Surrogate	%Recovery	Qualifier	L
1-Chlorooctane	106		7

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	118		70 - 130

# Lab Sample ID: LCSD 880-42996/3-A Matrix: Solid

Analysis Batch: 42937 Analyte Gasoline Range Organics (GRO)-C6-C10							Prep E	42996	
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1025		mg/Kg		103	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	1000	1258		mg/Kg		126	70 - 130	12	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	132	S1+	70 - 130

# Lab Sample ID: 880-23059-A-1-F MS

Matrix: Solid Analysis Batch: 42937									Prep Type: Tota Prep Batch: 4	
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	958.3		mg/Kg		91	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2	999	534.1	F1	mg/Kg		51	70 - 130	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	53	S1-	70 - 130
o-Terphenyl	46	S1-	70 - 130

### Lab Sample ID: 880-23059-A-1-G MSD **Matrix: Solid** Analysis Batch: 42937

Analysis Batch: 42937									Prep E	Batch: 4	12996
	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	<49.9	U	999	981.9		mg/Kg		94	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2	999	708.7	F1 F2	mg/Kg		69	70 - 130	28	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	68	S1-	70 - 130
o-Terphenyl	60	S1-	70 - 130

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

			/01.100			
Unit	D	%Rec	Limits	RPD	Limit	
mg/Kg		94	70 - 130	2	20	
mg/Kg		69	70 - 130	28	20	

Page 89 of 244

Job ID: 890-3714-1 SDG: 03D2057041

Client: Ensolum Project/Site: SEMU EUMONT #117

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-428 Matrix: Solid	68/1 <b>-A</b>						C	Clie	nt Sam	ple ID: M Prep Ty		
Analysis Batch: 42948											, , , , , , , , , , , , , , , , , , , ,	
Analysis Batom 42040		МВ МВ										
Analyte	Res	sult Qualifier		RL	Unit		D	Pr	epared	Analyz	zed	Dil Fac
Chloride	<5	5.00 U		5.00	mg/K	ζg			-	12/31/22	02:51	1
Lab Sample ID: LCS 880-42	868/2-A					Cli	ent \$	San	nple ID	: Lab Cor	ntrol Sa	ample
Matrix: Solid										Prep Ty	ype: So	oluble
Analysis Batch: 42948												
			Spike		LCS					%Rec		
Analyte			Added		Qualifier	Unit		D	%Rec	Limits		
Chloride			250	263.9	)	mg/Kg			106	90 - 110		
Lab Sample ID: LCSD 880-4	2868/3-A				(	Client S	am	ole	ID: Lab	Control	Sample	e Dup
Matrix: Solid										Prep Ty		
Analysis Batch: 42948												
-			Spike	LCSE	LCSD					%Rec		RPD
Analyte			Added	Resul	t Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride			250	256.2	2	mg/Kg		_	102	90 - 110	3	20
 Lab Sample ID: 890-3713-A-	1-B MS							Cli	ient Sa	mple ID: I	Matrix	Spike
Matrix: Solid										· Prep Ty		-
Analysis Batch: 42948												
-	Sample	Sample	Spike	MS	MS					%Rec		
Analyte	Result	Qualifier	Added	Resul	d Qualifier	Unit		D	%Rec	Limits		
Chloride	<5.05	U	253	266.0	)	mg/Kg		_	105	90 - 110		
- Lab Sample ID: 890-3713-A-	1-C MSD					Client	t Sai	mp	le ID: M	latrix Spil	ke Dup	licate
Matrix: Solid	-									Prep T		
Analysis Batch: 42948												
-	Sample	Sample	Spike	MSE	MSD					%Rec		RPD
Analyte	Result	Qualifier	Added	Resul	t Qualifier	Unit		D	%Rec	Limits	RPD	Limit

**Eurofins Carlsbad** 

# **QC Association Summary**

Client: Ensolum Project/Site: SEMU EUMONT #117

### **GC VOA**

### Prep Batch: 42941

.ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-3714-1	SS03	Total/NA	Solid	5035	
/IB 880-42941/5-A	Method Blank	Total/NA	Solid	5035	
.CS 880-42941/1-A	Lab Control Sample	Total/NA	Solid	5035	
CSD 880-42941/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
80-23059-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
80-23059-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
-ab Sample ID 390-3714-1	Client Sample ID	Prep Type Total/NA	Matrix	<u>Method</u>	Prep Batch 42941
ab Sample ID					Prep Batch
	Method Blank	Total/NA	Solid	8021B	42941
1R 880_42941/5_A			oonu		
	Lab Control Sample	Total/NA	Solid	8021B	42941
CS 880-42941/1-A			Solid Solid	8021B 8021B	
/IB 880-42941/5-A .CS 880-42941/1-A .CSD 880-42941/2-A .80-23059-A-1-B MS	Lab Control Sample	Total/NA			42941

### Analysis Batch: 43124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-3714-1	SS03	Total/NA	Solid	Total BTEX		

# GC Semi VOA

### Analysis Batch: 42937

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3714-1	SS03	Total/NA	Solid	8015B NM	42996
MB 880-42996/1-A	Method Blank	Total/NA	Solid	8015B NM	42996
LCS 880-42996/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42996
LCSD 880-42996/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42996
880-23059-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	42996
880-23059-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42996

### Prep Batch: 42996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3714-1	SS03	Total/NA	Solid	8015NM Prep	· · · · ·
MB 880-42996/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42996/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42996/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23059-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23059-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 43070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3714-1	SS03	Total/NA	Solid	8015 NM	

### HPLC/IC

### Leach Batch: 42868

L	.ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
Ē	390-3714-1	SS03	Soluble	Solid	DI Leach	
Ν	MB 880-42868/1-A	Method Blank	Soluble	Solid	DI Leach	
L	_CS 880-42868/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
L	CSD 880-42868/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

**Eurofins Carlsbad** 

Page 90 of 244

### Job ID: 890-3714-1 SDG: 03D2057041

# **QC** Association Summary

Client: Ensolum Project/Site: SEMU EUMONT #117

# HPLC/IC (Continued)

### Leach Batch: 42868 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	<b>Method</b>	Prep Batch
890-3713-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3713-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### Analysis Batch: 42948

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3714-1	SS03	Soluble	Solid	300.0	42868
MB 880-42868/1-A	Method Blank	Soluble	Solid	300.0	42868
LCS 880-42868/2-A	Lab Control Sample	Soluble	Solid	300.0	42868
LCSD 880-42868/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42868
890-3713-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	42868
890-3713-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	42868

**Page 91 of 244** 

5 6

Job ID: 890-3714-1 SDG: 03D2057041

Initial

Amount

5.02 g

5 mL

10.01 g

1 uL

5.03 g

Final

Amount

5 mL

5 mL

10 mL

1 uL

50 mL

Batch

42941

43042

43124

43070

42996

42937

42868

42948

Number

Dil

1

1

1

1

1

Factor

Run

### Client Sample ID: SS03 Date Collected: 12/22/22 10:00 Date Received: 12/27/22 13:34

Batch

Туре

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Leach

Prep

Batch

5035

8021B

Total BTEX

8015NM Prep

8015 NM

8015B NM

DI Leach

300.0

Method

Page 92 of 244

Job ID: 890-3714-1 SDG: 03D2057041

# Lab Sample ID: 890-3714-1

Analyst

MNR

Prepared

or Analyzed

12/30/22 11:33

01/03/23 20:08 MNR

01/04/23 09:17 AJ

01/03/23 10:37 SM

12/30/22 15:05 DM

12/31/22 08:37 SM

12/29/22 10:52 KS

12/31/22 03:19 CH

Matrix: Solid

Lab

EET MID

Laboratory References:

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Soluble

Soluble

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

**Accreditation/Certification Summary** 

Client: Ensolum Project/Site: SEMU EUMONT #117 Job ID: 890-3714-1 SDG: 03D2057041

### Laboratory: Eurofins Midland

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

uthority	Pro	ogram	Identification Number	Expiration Date
exas	NE	LAP	T104704400-22-25	06-30-23
The following applytor	are included in this repo	rt but the leberatory is r	at partified by the governing outbority	This list may include analytes for whis
the agency does not o	•	rt, but the laboratory is r	ior certilied by the governing authority.	This list may include analytes for whic
• •	•	Matrix	Analyte	This list may include analytes for which
the agency does not o	ffer certification.			

**Eurofins Carlsbad** 

10

# **Method Summary**

Client: Ensolum Project/Site: SEMU EUMONT #117 Job ID: 890-3714-1 SDG: 03D2057041

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

Page 95 of 244

Client: Ensolum Project/Site: SEMU EUMONT #117

Job ID: 890-3714-1
SDG: 03D2057041

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3714-1	SS03	Solid	12/22/22 10:00	12/27/22 13:34	0.2

		Environment Testing Xenco	t Testing	ŦĒMid	lland, TX (43 L Paso, TX ( lobbs, NM (5	32) 704-5440, 915) 585-344 75) 392-7550	/ildand, TX (432) 704-5440, San Antonio, TX (210) 509-333 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Midiand, TX (432) 704-5440, San Anionio, 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	Work Order No:	
Project Manager:	Hadlie Green			Bill to: (if different)		Kalei Jennings	SD		100 100 000	r Comments	
	Ensolum, LLC			Company Name:		Ensolum, LLC	C		Program: UST/PST PRP Brownfields	PRP Brownfields DRC Buperfund	rfund
	3122 Nat'l Parks Highway	s Highway		Address:		3122 Nat'l P	3122 Nat'l Parks Highway		State of Project: NM	1	]
e ZIP:	Carlsbad, NM 88220	8220		City, State ZIP:		Carlsbad, NM 88220	M 88220		Reporting: Level II Lev		
	432-557-8895		En	Email: hgreen@ensolum.com, kjennings(	solum.co	m, kjenning	15@ensolum.com	.com	Deliverables: EDD	ADaPT Other:	
Project Name:	SEMU EU	SEMU EUMONT #117		Turn Around				ANALYSIS REC	S REQUEST	Preservative Codes	odes
Project Number:	03D2	03D2057041	Routine	ne 🗌 Rush	Code					None: NO DI Wat	DI Water: H <sub>2</sub> O
Project Location:	32.5559572, -103.2069571	-103.20695	71 Due Date:	e:						Q	Me
Sampler's Name:	Julianna	Julianna Falcomata		TAT starts the day received by	by						HN
PO #:			the lab,	the lab, if received by 4:30pm	L	-				H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na	Na
SAMPLE RECEIPT	PT Temp Blank:	lank: (Yes	No Wet Ice:	e: (Yes) No	nete	-				H <sub>3</sub> PO <sub>4</sub> : HP	
Samples Received Intact:	Yes	No Therr	Thermometer ID:	LOWADZ	arai	-				NaHSO4: NABIS	
Cooler Custody Seals:	Yes	-	Correction Factor:	-0.0	F					To Acetate NaOH: 75	
Total Containers	103 140	Corre	Corrected Temperature				DES	890-3714 Chain	Chain of Custouy	NaOH+Ascorbic Acid: SAPC	PC
Sample Identification	tification	Matrix Di	Date Time Sampled Sampled	d Depth Grab/	mp Cont	втех трн	CHLOR			Sample Comments	ents
5501		S 12-1	000/ 26-27-2	.2' (		×	×			nAPP7231944	dalas
		-		_							
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	010 200.8 / 6020: nd Metal(s) to be an:	020: analyzed	8RCRA TCLP	RCRA 13PPM Texas 11 A		Sb As Ba Be Sb As Ba Be	Be B Cd Be Cd Cr	B Cd Ca Cr Co Cu Fe P Cd Cr Co Cu Pb Mn Mo	Fe Pb Mg Mn Mo Ni K Se Mo Ni Se Ag TI U	e Ag SiO <sub>2</sub> Na Sr TI Sn U V Zn Hg: 1631/245.1/7470/7471	
Notice: Signature of this ( of service. Eurofins Xenc of Eurofins Xenco. A min	document and relingu o will be liable only fo imum charge of \$85.0	Ishment of samp or the cost of sar 0 will be applied	oles constitutes a va nples and shall not to each project and	slid purchase order fr assume any respons 1 a charge of \$5 for ea	rom client co sibility for an ach sample :	mpany to Euro y losses or exponent	ofins Xenco, its a penses incurred l urofins Xenco, b	Milates and subcontractors by the client if such losses a ut not analyzed. These term	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 loases 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.	conditions t the control usly negotiated.	
1 Relinquished by: (Signature)	: (Signature)	R	Received by: (Signature)	gnature)		Date/Time	Re	Relinquished by: (Signature)	ure) Received I	Received by: (Signature) Date/Time	Time
1 Vallary	And and	Line	the		120	1207.221	334				
5 Acardon	and the		1				0			Revised Date: 042	Revised Date 08/25/2020 Rev. 2020 2
8											

Page 96 of 244

Chain of Custody

# Login Sample Receipt Checklist

Client: Ensolum

### Login Number: 3714 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	

List Source: Eurofins Carlsbad

Eurofins Carlsbad Released to Imaging: 2/20/2023 2:06:44 PM

# Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

### Login Number: 3714 List Number: 2 Creator: Teel, Brianna

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

Job Number: 890-3714-1 SDG Number: 03D2057041 List Source: Eurofins Midland 5 6 7 8 9 10 11 12 13 List Creation: 12/29/22 11:42 AM

14

Received by OCD: 2/2/2023 9:39:03 AM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Hadlie Green Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 1/6/2023 7:47:43 AM

# JOB DESCRIPTION

SEMU Eumont #117 SDG NUMBER 03D2057041

# **JOB NUMBER**

890-3724-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

Page 99 of 244

Page 1 of 31

Received by OCD: 2/2/2023 9:39:03 AM

# **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

RAMER

Generated 1/6/2023 7:47:43 AM

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

Laboratory Job ID: 890-3724-1 SDG: 03D2057041

# Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	12
QC Sample Results	13
QC Association Summary	20
Lab Chronicle	23
Certification Summary	26
Method Summary	27
Sample Summary	28
Chain of Custody	29
Receipt Checklists	30

Page 101 of 244

	Definitions/Olessen		
	Definitions/Glossary		
Client: Ensolur Project/Site: Sl	n EMU Eumont  #117	Job ID: 890-3724-1 SDG: 03D2057041	
Qualifiers			3
GC VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
S1-	Surrogate recovery exceeds control limits, low biased.		Ę
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier	Qualifier Description		
S1-	Surrogate recovery exceeds control limits, 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		
U	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		

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

QC

RER

RL

RPD

TEF TEQ

TNTC

### Job ID: 890-3724-1 SDG: 03D2057041

### Job ID: 890-3724-1

Client: Ensolum

### Laboratory: Eurofins Carlsbad

Project/Site: SEMU Eumont #117

### Narrative

Job Narrative 890-3724-1

#### Receipt

The samples were received on 12/29/2022 3:31 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-3724-1), FS02 (890-3724-2), FS03 (890-3724-3), FS04 (890-3724-4), FS05 (890-3724-5), SW01 (890-3724-6) and SW02 (890-3724-7).

#### GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS01 (890-3724-1). 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 880-43178 and analytical batch 880-43200 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS02 (890-3724-2) and FS04 (890-3724-4). 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 samples were outside control limits: (880-23145-A-1-C MS) and (880-23145-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: SW02 (890-3724-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-43082 and analytical batch 880-43108 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (880-23150-A-21-D). 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.

RL

0.0998

0.0998

0.0998

0.200

0.0998

0.200

RL

RL

250

0.200

Limits

70 - 130

70 - 130

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Unit

Unit

mg/Kg

mg/Kg

D

D

D

Prepared

01/04/23 12:33

01/04/23 12:33

01/04/23 12:33

01/04/23 12:33

01/04/23 12:33

01/04/23 12:33

Prepared

01/04/23 12:33

01/04/23 12:33

Prepared

Prepared

Job ID: 890-3724-1 SDG: 03D2057041

### **Client Sample ID: FS01**

Project/Site: SEMU Eumont #117

Client: Ensolum

Sample Depth: 4'

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Analyte

Analyte

Total TPH

Total BTEX

Ethylbenzene

**Xylenes**, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Date Collected: 12/29/22 11:00 Date Received: 12/29/22 15:31

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

Method: TAL SOP Total BTEX - Total BTEX Calculation

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

Result Qualifier

Qualifier

S1+

Result Qualifier

Result Qualifier

0.224

4.48

2.96

19.5

13.1 32.6

> 224 102

40.3

4580

%Recovery

Lab Sample ID: 890-3724

Analyzed

01/05/23 01:07

01/05/23 01:07

01/05/23 01:07

Analyzed

01/05/23 01:07

01/05/23 01:07

Analyzed

01/05/23 10:31

Analyzed

01/05/23 12:44

Matrix: So

724-1 Solid	
	5
Dil Fac	
50	
50	
50	
50	
50	8
50	U
Dil Fac	9
50	
50	
Dil Fac	
1	
Dil Fac	13

Dil 01/05/23 01:07 01/05/23 01:07 01/05/23 01:07

	3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1500		250	mg/Kg		01/03/23 13:32	01/04/23 18:09	5
Diesel Range Organics (Over C10-C28)	3080		250	mg/Kg		01/03/23 13:32	01/04/23 18:09	5
Oll Range Organics (Over C28-C36)	<250	U	250	mg/Kg		01/03/23 13:32	01/04/23 18:09	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130			01/03/23 13:32	01/04/23 18:09	5
o-Terphenyl	108		70 - 130			01/03/23 13:32	01/04/23 18:09	5
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Chloride	287	5.00	mg/Kg	01/04/23 05:32 1
Client Sample ID: FS02				Lab Sample ID: 890-3724-2
Date Collected: 12/29/22 11:05				Matrix: Solid

Date Received: 12/29/22 15:31 Sample Depth: 4'

Method: SW846 8021B - Volat	ile Organic Comp	ounds (GC)	)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0200	U	0.0200	mg/Kg		01/05/23 15:26	01/05/23 20:27	10
Toluene	<0.0200	U	0.0200	mg/Kg		01/05/23 15:26	01/05/23 20:27	10
Ethylbenzene	<0.0200	U	0.0200	mg/Kg		01/05/23 15:26	01/05/23 20:27	10
m-Xylene & p-Xylene	<0.0399	U	0.0399	mg/Kg		01/05/23 15:26	01/05/23 20:27	10
o-Xylene	0.0645		0.0200	mg/Kg		01/05/23 15:26	01/05/23 20:27	10
Xylenes, Total	0.0645		0.0399	mg/Kg		01/05/23 15:26	01/05/23 20:27	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	44	S1-	70 - 130			01/05/23 15:26	01/05/23 20:27	10

# **Client Sample Results**

Job ID: 890-3724-1 SDG: 03D2057041

Matrix: Solid

5

Lab Sample ID: 890-3724-2

### Client Sample ID: FS02

Project/Site: SEMU Eumont #117

Date Collected: 12/29/22 11:05 Date Received: 12/29/22 15:31

### Sample Depth: 4'

Client: Ensolum

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

1,4-Diffuorobenzene (Surr)       106       70 - 130         Method: TAL SOP Total BTEX - Total BTEX Calculation       Analyte       Result       Qualifier       RL       Unit       D         Total BTEX       0.0645       0.0399       mg/Kg       Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)         Analyte       Result       Qualifier       RL       Unit       D         Total TPH       192       49.9       mg/Kg       Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)         Analyte       Result       Qualifier       RL       Unit       D         Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Method: SW846 8015B NM - Diesel Range Organics (Over C28-C36)       <49.9       Mg/Kg         Oll Range Organics (Over C28-C36)       <49.9       U       49.9       Mg/Kg	Prepared	Analyzed	Dil Fac
AnalyteResultQualifierRLUnitDTotal BTEX0.06450.0399mg/KgMethod: SW846 8015 NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLTotal TPH19249.9mg/KgMethod: SW846 8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLTotal TPH19249.9mg/KgMethod: SW846 8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLGasoline Range Organics<49.9U49.9(GRO)-C6-C10Diesel Range Organics (Over19249.9mg/KgDiesel Range Organics (Over C28-C36)<49.9U49.9mg/KgSurrogate%RecoveryQualifierLimits1-Chlorooctane12070 - 130o-Terphenyl11070 - 130	01/05/23 15:26	01/05/23 20:27	10
Total BTEX0.06450.0399mg/KgMethod: SW846 8015 NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLUnitDTotal TPH19249.9mg/KgMethod: SW846 8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLUnitDGasoline Range Organics<49.9			
Method:     SW846 8015 NM - Diesel Range Organics (DRO) (GC)       Analyte     Result     Qualifier     RL     Unit     D       Total TPH     192     49.9     mg/Kg       Method:     SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Analyte     Result     Qualifier     RL     Unit     D       Gasoline Range Organics     <49.9	Prepared	Analyzed	Dil Fac
AnalyteResultQualifierRLUnitDTotal TPH19249.9mg/KgMethod: SW846 8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLUnitDGasoline Range Organics<49.9		01/06/23 08:35	1
Total TPH19249.9mg/KgMethod: SW846 8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLUnitDGasoline Range Organics<49.9			
Method:     SW846 8015B NM - Diesel Range Organics (DRO) (GC)       Analyte     Result     Qualifier     RL     Unit     D       Gasoline Range Organics     <49.9	Prepared	Analyzed	Dil Fac
AnalyteResultQualifierRLUnitDGasoline Range Organics<49.9		01/05/23 12:44	1
(GRO)-C6-C10       Diesel Range Organics (Over       192       49.9       mg/Kg         C10-C28)       OII Range Organics (Over C28-C36)       <49.9       U       49.9       mg/Kg         Surrogate       %Recovery       Qualifier       Limits         1-Chlorooctane       120       70 - 130         o-Terphenyl       110       70 - 130	Prepared 01/03/23 13:32	Analyzed	Dil Fac
AnalyteResultQualifierRLUnitDGasoline Range Organics<49.9			
Diesel Range Organics (Over         192         49.9         mg/Kg           C10-C28)         Oll Range Organics (Over C28-C36)         <49.9	01/03/23 13:32	01/04/23 18:51	1
Oll Range Organics (Over C28-C36)<49.9U49.9mg/KgSurrogate%RecoveryQualifierLimits1-Chlorooctane12070 - 130o-Terphenyl11070 - 130	01/03/23 13:32	01/04/23 18:51	1
Surrogate%RecoveryQualifierLimits1-Chlorooctane12070 - 130o-Terphenyl11070 - 130			
1-Chlorooctane         120         70 - 130           o-Terphenyl         110         70 - 130	01/03/23 13:32	01/04/23 18:51	1
o-Terphenyl 110 70 - 130	Prepared	Analyzed	Dil Fac
	01/03/23 13:32	01/04/23 18:51	1
Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble	01/03/23 13:32	01/04/23 18:51	1
Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble			
	) Propared	Analyzod	Dil Ea

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23.1	5.04	mg/Kg			01/04/23 05:46	1

### Client Sample ID: FS03

Date Collected: 12/29/22 11:10 Date Received: 12/29/22 15:31 Sample Depth: 4'

# Lab Sample ID: 890-3724-3

Matrix: Solid

Method: SW846 8021B - Volat	ile Organic Comp	ounds (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.0996	U	0.0996	mg/Kg		01/04/23 12:33	01/05/23 01:49	50
Toluene	2.26		0.0996	mg/Kg		01/04/23 12:33	01/05/23 01:49	50
Ethylbenzene	2.11		0.0996	mg/Kg		01/04/23 12:33	01/05/23 01:49	50
m-Xylene & p-Xylene	4.44		0.199	mg/Kg		01/04/23 12:33	01/05/23 01:49	50
o-Xylene	2.81		0.0996	mg/Kg		01/04/23 12:33	01/05/23 01:49	50
Xylenes, Total	7.25		0.199	mg/Kg		01/04/23 12:33	01/05/23 01:49	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130			01/04/23 12:33	01/05/23 01:49	50
1,4-Difluorobenzene (Surr)	92		70 - 130			01/04/23 12:33	01/05/23 01:49	50
- Method: TAL SOP Total BTEX	- Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	11.6		0.199	mg/Kg			01/05/23 10:31	1
Method: SW846 8015 NM - Die	esel Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1520		50.0	mg/Kg		,	01/05/23 12:44	1

Job ID: 890-3724-1 SDG: 03D2057041

Lab Sample ID: 890-3724-4

Matrix: Solid

### **Client Sample ID: FS03**

Project/Site: SEMU Eumont #117

Date Collected: 12/29/22 11:10 Date Received: 12/29/22 15:31

### Sample Depth: 4'

Client: Ensolum

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	449		50.0	mg/Kg		01/03/23 13:32	01/04/23 18:30	1
Diesel Range Organics (Over C10-C28)	1070		50.0	mg/Kg		01/03/23 13:32	01/04/23 18:30	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/03/23 13:32	01/04/23 18:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	122		70 - 130			01/03/23 13:32	01/04/23 18:30	1
o-Terphenyl	114		70 - 130			01/03/23 13:32	01/04/23 18:30	1

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

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	893	5.03	mg/Kg			01/04/23 05:51	1

### **Client Sample ID: FS04**

### Date Collected: 12/29/22 11:15 Date Received: 12/29/22 15:31

Sample Depth: 4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0199	U	0.0199	mg/Kg		01/05/23 15:26	01/05/23 20:48	10
Toluene	<0.0199	U	0.0199	mg/Kg		01/05/23 15:26	01/05/23 20:48	10
Ethylbenzene	<0.0199	U	0.0199	mg/Kg		01/05/23 15:26	01/05/23 20:48	10
m-Xylene & p-Xylene	<0.0398	U	0.0398	mg/Kg		01/05/23 15:26	01/05/23 20:48	10
o-Xylene	0.0223		0.0199	mg/Kg		01/05/23 15:26	01/05/23 20:48	10
Xylenes, Total	<0.0398	U	0.0398	mg/Kg		01/05/23 15:26	01/05/23 20:48	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	62	S1-	70 - 130			01/05/23 15:26	01/05/23 20:48	10
1,4-Difluorobenzene (Surr)	105		70 - 130			01/05/23 15:26	01/05/23 20:48	10
Method: TAL SOP Total BTEX - To Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0398	U	0.0398	mg/Kg			01/06/23 08:35	1
Method: SW846 8015 NM - Diesel	Range Organ	ics (DRO) (	GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	111		49.9	mg/Kg			01/05/23 12:44	1
Method: SW846 8015B NM - Diese	el Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/03/23 13:32	01/04/23 19:12	1
Diesel Range Organics (Over C10-C28)	111		49.9	mg/Kg		01/03/23 13:32	01/04/23 19:12	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/03/23 13:32	01/04/23 19:12	1

#### 01/03/23 13:32 01/04/23 19:12 70 - 130 1-Chlorooctane 110 1 o-Terphenyl 101 70 - 130 01/03/23 13:32 01/04/23 19:12 1

		Clier	nt Sample Re	sults				
Client: Ensolum Project/Site: SEMU Eumont #117							Job ID: 890 SDG: 03D2	
Client Sample ID: FS04						Lab Sar	nple ID: 890-	3724-4
Date Collected: 12/29/22 11:15 Date Received: 12/29/22 15:31								ix: Solic
Sample Depth: 4'								
Method: MCAWW 300.0 - Anions, Analyte		ography - S Qualifier	oluble RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.5		5.05	mg/Kg			01/04/23 05:56	
Client Sample ID: FS05						Lab Sar	nple ID: 890-	3724-5
Date Collected: 12/29/22 11:20 Date Received: 12/29/22 15:31 Sample Depth: 4'								ix: Solic
Method: SW846 8021B - Volatile (			;) RL	Unit		Bronorod	Applyzed	Dil Ea
Analyte Benzene	- Result <0.00200	Qualifier	RL 0.00200	Unit mg/Kg	D	Prepared 01/04/23 12:33	Analyzed 01/05/23 00:06	Dil Fac
Toluene	<0.00200		0.00200	mg/Kg		01/04/23 12:33	01/05/23 00:06	
Ethylbenzene	< 0.00200		0.00200	mg/Kg		01/04/23 12:33	01/05/23 00:06	
m-Xylene & p-Xylene	< 0.00399		0.00399	mg/Kg		01/04/23 12:33	01/05/23 00:06	
o-Xylene	<0.00200		0.00200	mg/Kg		01/04/23 12:33	01/05/23 00:06	
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/04/23 12:33	01/05/23 00:06	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	122		70 - 130			01/04/23 12:33	01/05/23 00:06	
1,4-Difluorobenzene (Surr)	98		70 - 130			01/04/23 12:33	01/05/23 00:06	-
Method: TAL SOP Total BTEX - To	otal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00399	U	0.00399	mg/Kg			01/05/23 10:31	
Method: SW846 8015 NM - Diesel	Range Organ	ics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			01/05/23 12:44	
Method: SW846 8015B NM - Dies			) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/03/23 13:32	01/04/23 19:33	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/03/23 13:32	01/04/23 19:33	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/03/23 13:32	01/04/23 19:33	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	129		70 - 130			01/03/23 13:32	01/04/23 19:33	
o-Terphenyl	115		70 - 130			01/03/23 13:32	01/04/23 19:33	
Method: MCAWW 300.0 - Anions,					_			
Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fa

AnalyteResultQualifierRLUnitDPreparedAnalyzedDChloride<4.95</td>U4.95mg/Kg01/04/23 06:0101/04/23 06:01

Eurofins Carlsbad

Job ID: 890-3724-1 SDG: 03D2057041

### **Client Sample ID: SW01**

Project/Site: SEMU Eumont #117

Date Collected: 12/29/22 12:30 Date Received: 12/29/22 15:31

Sample Depth: 0-4'

Client: Ensolum

Lab Sample ID: 890-3724-6

Matrix:

24-6 Solid	3
Cona	4
	5
Dil Fac	
1	6
1	
1	7
1	
1	8
1	
Dil Fac	9
1 1	10
Dil Fac	11
1	12
Dil Fac	13
1	14

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/04/23 12:33	01/05/23 00:26	
Toluene	<0.00199	U	0.00199	mg/Kg		01/04/23 12:33	01/05/23 00:26	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/04/23 12:33	01/05/23 00:26	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/04/23 12:33	01/05/23 00:26	
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/04/23 12:33	01/05/23 00:26	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/04/23 12:33	01/05/23 00:26	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	124		70 - 130			01/04/23 12:33	01/05/23 00:26	
1,4-Difluorobenzene (Surr)	97		70 - 130			01/04/23 12:33	01/05/23 00:26	
Method: TAL SOP Total BTEX - T	otal BTEX Cal	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/05/23 10:31	
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			01/05/23 12:44	
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/03/23 13:32	01/04/23 19:54	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/03/23 13:32	01/04/23 19:54	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/03/23 13:32	01/04/23 19:54	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	129		70 - 130			01/03/23 13:32	01/04/23 19:54	
p-Terphenyl	113		70 - 130			01/03/23 13:32	01/04/23 19:54	
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - S	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	8.45		5.03	mg/Kg			01/04/23 06:15	
lient Sample ID: SW02						Lab San	nple ID: 890-	<b>3724-</b> 7
ate Collected: 12/29/22 12:35							Matri	x: Solie
ate Received: 12/29/22 15:31								
ample Depth: 0-4'								
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC	)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		01/04/23 12:33	01/05/23 00:47	1
Toluene	<0.00198	U	0.00198	mg/Kg		01/04/23 12:33	01/05/23 00:47	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		01/04/23 12:33	01/05/23 00:47	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		01/04/23 12:33	01/05/23 00:47	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		01/04/23 12:33	01/05/23 00:47	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		01/04/23 12:33	01/05/23 00:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			01/04/23 12:33	01/05/23 00:47	1

Eurofins Carlsbad

**Released to Imaging: 2/20/2023 2:06:44 PM**
# **Client Sample Results**

Limits

70 - 130

RL

RL

50.0

0.00396

Job ID: 890-3724-1 SDG: 03D2057041

# **Client Sample ID: SW02**

Project/Site: SEMU Eumont #117

Date Collected: 12/29/22 12:35 2 15:31

Date Received:	12/29/2
Sample Depth:	0-4'

1,4-Difluorobenzene (Surr)

Client: Ensolum

Surrogate

Analyte

Analyte

.....

Total TPH

Total BTEX

Unit

Unit

Unit

mg/Kg

mg/Kg

Prepared

01/04/23 12:33

Prepared

Prepared

Prepared

D

D

D

Lab Sample ID: 890-3724-7

Analyzed

01/05/23 00:47

Analyzed

01/05/23 10:31

# Matrix: Solid

Dil Fac

Dil Fac

1

1

5

Analyzed	Dil Fac	9
01/04/23 11:34	1	
Analyzed	Dil Fac	
01/04/23 01:45	1	
01/04/23 01:45	1	12
01/04/23 01:45	1	13
Analyzed	Dil Fac	

wethod: 500646 60156 NW - Diese	Range Organics (DRO) (GC)	
Analyte	Result Qualifier	RL

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

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

Method: TAL SOP Total BTEX - Total BTEX Calculation

%Recovery Qualifier

Result Qualifier

Result Qualifier

<50.0 U

95

<0.00396 U

	Ion Chromato	graphy - S	oluble				
o-Terphenyl	123		70 - 130		01/03/23 13:38	01/04/23 01:45	1
1-Chlorooctane	133	S1+	70 - 130		01/03/23 13:38	01/04/23 01:45	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg	01/03/23 13:38	01/04/23 01:45	1
C10-C28)	\$30.0	0	30.0	ilig/ikg	01/03/20 13:30	01/04/23 01.43	
(GRO)-C6-C10 Diesel Range Organics (Over	<50.0		50.0	mg/Kg	01/03/23 13:38	01/04/23 01:45	1
Gasoline Range Organics	<50.0	U	50.0	mg/Kg	01/03/23 13:38	01/04/23 01:45	1

,		<b>Q</b>		•	_	 ,		
Chloride	<5.01	U	5.01	mg/Kg		01/04/23 06:19	1	

Client: Ensolum Project/Site: SEMU Eumont #117

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

_				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
880-23145-A-1-E MS	Matrix Spike	110	98		
880-23145-A-1-F MSD	Matrix Spike Duplicate	102	99		6
880-23188-A-1-E MS	Matrix Spike	101	109		
880-23188-A-1-F MSD	Matrix Spike Duplicate	98	108		
890-3724-1	FS01	224 S1+	102		
890-3724-2	FS02	44 S1-	106		8
890-3724-3	FS03	121	92		
890-3724-4	FS04	62 S1-	105		0
890-3724-5	FS05	122	98		3
890-3724-6	SW01	124	97		
890-3724-7	SW02	116	95		
LCS 880-43160/1-A	Lab Control Sample	105	97		
LCS 880-43178/1-A	Lab Control Sample	95	108		
LCSD 880-43160/2-A	Lab Control Sample Dup	99	98		
LCSD 880-43178/2-A	Lab Control Sample Dup	99	108		
MB 880-43080/5-A	Method Blank	99	88		
MB 880-43160/5-A	Method Blank	99	88		13
MB 880-43178/5-A	Method Blank	99	101		
Surrogate Legend					

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

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

Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-23145-A-1-C MS	Matrix Spike	13 S1-	11 S1-	
880-23145-A-1-D MSD	Matrix Spike Duplicate	14 S1-	11 S1-	
880-23150-A-21-E MS	Matrix Spike	97	82	
880-23150-A-21-F MSD	Matrix Spike Duplicate	118	94	
890-3724-1	FS01	110	108	
890-3724-2	FS02	120	110	
890-3724-3	FS03	122	114	
890-3724-4	FS04	110	101	
890-3724-5	FS05	129	115	
890-3724-6	SW01	129	113	
890-3724-7	SW02	133 S1+	123	
LCS 880-43082/2-A	Lab Control Sample	100	91	
LCS 880-43083/2-A	Lab Control Sample	111	94	
LCSD 880-43082/3-A	Lab Control Sample Dup	115	99	
LCSD 880-43083/3-A	Lab Control Sample Dup	114	95	
MB 880-43082/1-A	Method Blank	132 S1+	119	
MB 880-43083/1-A	Method Blank	109	111	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-3724-1

SDG: 03D2057041

Prep Type: Total/NA

Client: Ensolum Project/Site: SEMU Eumont #117

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

										Client Sa	mple ID: Me	thod	Blank		
Matrix: Solid											Prep Typ				
Analysis Batch: 43041											Prep Ba				
-	I	ИВ МВ	в												
Analyte	Res	ult Qu	ualifier	RL		Unit		D	P	repared	Analyzed		Dil Fac		
Benzene	<0.002	00 U		0.00200		mg/K	g	_	01/0	3/23 13:11	01/04/23 01:0	5	1		
Toluene	<0.002	00 U		0.00200		mg/Kg	g		01/0	3/23 13:11	01/04/23 01:0	5	1		
Ethylbenzene	<0.002	00 U		0.00200		mg/Kg	g		01/0	3/23 13:11	01/04/23 01:0	5	1		
m-Xylene & p-Xylene	<0.004	00 U		0.00400		mg/Kg	g g		01/0	3/23 13:11	01/04/23 01:0	5	1		
o-Xylene	<0.002	00 U		0.00200		mg/Kg	g		01/0	3/23 13:11	01/04/23 01:0	5	1		
Xylenes, Total	<0.004	00 U		0.00400		mg/Kg	g		01/0	3/23 13:11	01/04/23 01:0	5	1		
		ИВ МІ	D												
Surrogato	ہ Recov		ם ualifier	Limits					D	repared	Applyzod		Dil Fac		
Surrogate 4-Bromofluorobenzene (Surr)	////////	<u>99</u> <u>4</u>	uanner	70 - 130						3/23 13:11	Analyzed 01/04/23 01:0		1		
1,4-Difluorobenzene (Surr)		88		70 - 130 70 - 130						3/23 13:11	01/04/23 01:0		1		
		00		70 - 700					01/0	5/25 15.11	01/04/20 01.0	0	,		
Lab Sample ID: MB 880-43160/5-A										Client Sa	mple ID: Me	thod	Blank		
Matrix: Solid											Prep Typ				
Analysis Batch: 43041											Prep Ba				
-	I	ИВ МВ	в												
Analyte	Res	ult Qu	ualifier	RL		Unit		D	P	repared	Analyzed		Dil Fac		
Benzene	<0.002	00 U		0.00200		mg/K	g		01/0	4/23 12:33	01/04/23 18:1	4	1		
Toluene	<0.002	00 U		0.00200		mg/Kg	g		01/0	4/23 12:33	01/04/23 18:1	4	1		
Ethylbenzene	<0.002	00 U		0.00200	00 mg/Kg		mg/Kg 01/04/23 12:3		4/23 12:33	01/04/23 18:1	4	1			
m-Xylene & p-Xylene	<0.004	00 U		0.00400	400 mg/Kg			01/0	4/23 12:33	01/04/23 18:1	4	1			
o-Xylene	<0.002	00 U		0.00200	) mg/Kg			01/0	4/23 12:33	01/04/23 18:1	4	1			
Xylenes, Total	<0.004	00 U		0.00400		mg/Kg		mg/Kg			01/0	4/23 12:33	01/04/23 18:1	4	1
		ИВ МІ	D												
Surrogate	، Recov		ualifier	Limits					P	repared	Analyzed		Dil Fac		
4-Bromofluorobenzene (Surr)	//////	<u>99</u>	aumer	70 - 130						4/23 12:33	01/04/23 18:1	4	1		
1,4-Difluorobenzene (Surr)		88		70 - 130						4/23 12:33	01/04/23 18:1		1		
_															
Lab Sample ID: LCS 880-43160/1-A								С	lient	Sample	ID: Lab Cont	rol S	ample		
Matrix: Solid											Prep Typ	e: To	tal/NA		
Analysis Batch: 43041											Prep Ba	tch:	<b>43160</b>		
				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	0.09692		mg/Kg			97	70 - 130				
Ethylbenzene				0.100	0.09512		mg/Kg			95	70 - 130				
m-Xylene & p-Xylene				0.200	0.2131		mg/Kg			107	70 - 130				
o-Xylene				0.100	0.1060		mg/Kg			106	70 - 130				
	LCS L	cs													
Surrogate %	Recovery (		r	Limits											
4-Bromofluorobenzene (Surr)	105			70 - 130											
1,4-Difluorobenzene (Surr)	97			70 - 130											
Lab Sample ID: LCSD 880-43160/2-	A						Cli	ent	Sam	ple ID: L	ab Control S	amp	le Dup		
Matrix: Solid											Prep Typ	e: To	tal/NA		
Analysis Batch: 43041											Prep Ba	tch:	43160		
				Spike	LCSD	LCSD					%Rec		RPD		
Analyte				Added	Result	Qualifier	Unit		D	%Rec		RPD	Limit		
Benzene			-	0 100	0.00110		ma/Ka		_	01	70 130	5	35		

Job ID: 890-3724-1

SDG: 03D2057041

Page 111 of 244

Released to Imaging: 2/20/2023 2:06:44 PM

Benzene

0.09119

mg/Kg

91

70 - 130

0.100

35

5

Client: Ensolum Project/Site: SEMU Eumont #117 Job ID: 890-3724-1 SDG: 03D2057041

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

Lab Sample ID: LCSD 880-4 Matrix: Solid	3160/2-A					Clie	nt Sam	nple ID:	Lab Contro Pren 1	ol Sampl Type: To	
Analysis Batch: 43041										Batch:	
			Spike	LCSD	LCSD				%Rec	Daton	RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Toluene			0.100	0.09298		mg/Kg		93	70 - 130	4	3
Ethylbenzene			0.100	0.08977		mg/Kg		90	70 - 130	6	3
m-Xylene & p-Xylene			0.200	0.2004		mg/Kg		100	70 - 130	6	35
o-Xylene			0.100	0.09983		mg/Kg		100	70 - 130	6	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	99		70 - 130								
1,4-Difluorobenzene (Surr)	98		70 - 130								
Lab Sample ID: 880-23145-4	A-1-E MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid										ype: To	
Analysis Batch: 43041										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00200	U	0.0996	0.08771		mg/Kg		88	70 - 130		
Toluene	<0.00200	U	0.0996	0.09206		mg/Kg		92	70 - 130		
Ethylbenzene	<0.00200	U	0.0996	0.08943		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1999		mg/Kg		100	70 - 130		
o-Xylene	<0.00200	U	0.0996	0.09881		mg/Kg		99	70 - 130		
	MS	MS									
•	a ( <b>-</b>										

	1//3	ws	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

### Lab Sample ID: 880-23145-A-1-F MSD Matrix: Solid Analysis Batch: 43041

Analysis Daton. 40041									i iep	Daton.	43100
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0990	0.08713		mg/Kg		88	70 - 130	1	35
Toluene	<0.00200	U	0.0990	0.08757		mg/Kg		88	70 - 130	5	35
Ethylbenzene	<0.00200	U	0.0990	0.08376		mg/Kg		85	70 - 130	7	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1849		mg/Kg		93	70 - 130	8	35
o-Xylene	<0.00200	U	0.0990	0.09176		mg/Kg		93	70 - 130	7	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

# Lab Sample ID: MB 880-43178/5-A Matrix: Solid Analysis Batch: 43200

#### МВ МВ Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Benzene <0.00200 U 0.00200 01/04/23 15:26 01/05/23 11:28 mg/Kg 1 Toluene <0.00200 U 0.00200 mg/Kg 01/04/23 15:26 01/05/23 11:28 1 Ethylbenzene <0.00200 U 0.00200 mg/Kg 01/04/23 15:26 01/05/23 11:28 1 <0.00400 U 0.00400 01/04/23 15:26 01/05/23 11:28 m-Xylene & p-Xylene mg/Kg 1

**Eurofins Carlsbad** 

Page 112 of 244

5

7

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

# Prep Batch: 43160

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 43178

Client: Ensolum Project/Site: SEMU Eumont #117

Lab Sample ID: MB 880-43178/5-A

Lab Sample ID: LCS 880-43178/1-A

Matrix: Solid

Analyte o-Xylene

Xylenes, Total

Surrogate

Matrix: Solid

Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene

o-Xylene

Analysis Batch: 43200

4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)

Analysis Batch: 43200

# Method: 8021B - Volatile Organic C

ic Compo	ounds (C	SC) (Cont	inued)								
								Client Sa	ample ID: Metho Prep Type: <sup>-</sup> Prep Patel	Fotal/NA	
МВ	мв								Prep Batcl	1. 43170	5
Result	Qualifier		RL	Unit		D	Р	repared	Analyzed	Dil Fac	
<0.00200	U	0.002	200	mg/K	g	_	01/0	4/23 15:26	01/05/23 11:28	1	
<0.00400	U	0.004	400	mg/K	g		01/0	4/23 15:26	01/05/23 11:28	1	
											7
	MB	1					_		A	D# 5	
%Recovery	Qualifier	Limits						repared	Analyzed	Dil Fac	
99		70 - 13	0				01/0	4/23 15:26	01/05/23 11:28	1	ð
101		70 - 13	0				01/0	4/23 15:26	01/05/23 11:28	1	
											9
						С	lient	Sample	ID: Lab Control	Sample	
									Prep Type: 7	Fotal/NA	
									Prep Batcl	n: <b>43178</b>	
		Spike	LCS	LCS					%Rec		
		Added	Result	Qualifier	Unit		D	%Rec	Limits		
		0.100	0.09959		mg/Kg			100	70 - 130		
		0.100	0.09381		mg/Kg			94	70 - 130		
		0.100	0.09104		mg/Kg			91	70 - 130		
		0.200	0.1883		mg/Kg			94	70 - 130		13
		0.100	0.08972		mg/Kg			90	70 - 130		

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

# Lab Sample ID: LCSD 880-43178/2-A Matrix: Solid

# Analysis Batch: 43200

Analysis Batch: 43200							Prep	Batch:	43178
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1047		mg/Kg		105	70 - 130	5	35
Toluene	0.100	0.09721		mg/Kg		97	70 - 130	4	35
Ethylbenzene	0.100	0.09513		mg/Kg		95	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1965		mg/Kg		98	70 - 130	4	35
o-Xylene	0.100	0.09321		mg/Kg		93	70 - 130	4	35
ICSD ICSD									

	LUGD	L03D	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

# Lab Sample ID: 880-23188-A-1-E MS Matrix: Solid

# Analysis Batch: 43200

Analysis Batch: 43200									Prep	o Batch: 43178
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	< 0.00201	U	0.101	0.07475		mg/Kg		74	70 - 130	
Toluene	<0.00201	U F1	0.101	0.05821	F1	mg/Kg		57	70 - 130	
Ethylbenzene	<0.00201	U F1	0.101	0.04970	F1	mg/Kg		49	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1017	F1	mg/Kg		50	70 - 130	
o-Xylene	<0.00201	U F1	0.101	0.04826	F1	mg/Kg		48	70 - 130	

**Eurofins Carlsbad** 

Page 113 of 244

Job ID: 890-3724-1 SDG: 03D2057041

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Prep Type: Total/NA

Client: Ensolum Project/Site: SEMU Eumont #117

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

# Lab Sample ID: 880-23188-A-1-E MS

# Matrix: Solid Analysis Batch: 43200

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

# Lab Sample ID: 880-23188-A-1-F MSD Matrix: Solid

# Analysia Batahy 42200

Analysis Batch: 43200									Prep	Batch:	43178
	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	0.07783		mg/Kg		79	70 - 130	4	35
Toluene	<0.00201	U F1	0.0990	0.06118	F1	mg/Kg		61	70 - 130	5	35
Ethylbenzene	<0.00201	U F1	0.0990	0.05304	F1	mg/Kg		54	70 - 130	7	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.1076	F1	mg/Kg		54	70 - 130	6	35
o-Xylene	<0.00201	U F1	0.0990	0.05062	F1	mg/Kg		51	70 - 130	5	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	98		70 - 130								
1,4-Difluorobenzene (Surr)	108		70 - 130								

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

 Lab Sample ID: MB 880-43082/1-A								Client S	ample ID: Metho	od Blank
Matrix: Solid									Prep Type:	
Analysis Batch: 43108									Prep Batc	
-	MB	МВ								
Analyte	Result	Qualifier	RL		Unit		D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/K	g	01	/03/23 13:32	01/04/23 09:17	1
(GRO)-C6-C10										
Diesel Range Organics (Over	<50.0	U	50.0		mg/K	g	01	/03/23 13:32	01/04/23 09:17	1
C10-C28)										
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/K	g	01	/03/23 13:32	01/04/23 09:17	1
	MB	MB								
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac
1-Chlorooctane	132	S1+	70 - 130				01	/03/23 13:32	2 01/04/23 09:17	1
o-Terphenyl	119		70 - 130				01	/03/23 13:32	2 01/04/23 09:17	1
- Lab Sample ID: LCS 880-43082/2-A							Clie	nt Sample	ID: Lab Control	Sample
Matrix: Solid									Prep Type:	
Analysis Batch: 43108									Prep Batc	
Analysis Batom 40100			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics			1000	926.3		mg/Kg		93	70 - 130	
(GRO)-C6-C10										

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	91		70 - 130

Client Sample ID: Matrix Spike

Job ID: 890-3724-1

SDG: 03D2057041

Prep Type: Total/NA

Prep Type: Total/NA

Details 40470

**Client Sample ID: Matrix Spike Duplicate** 

Prep Batch: 43178

Page 114 of 244

Eurofins Carlsbad

Diesel Range Organics (Over

C10-C28)

1000

961.0

mg/Kg

96

70 - 130

Job ID: 890-3724-1 SDG: 03D2057041

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

	3082/3-A						Clie	ent S	Sam	ple ID: L	ab Contro		-
Matrix: Solid												Type: To	
Analysis Batch: 43108											Prep	Batch:	43082
				Spike	LCSD	LCSD					%Rec		RPD
Analyte				Added		Qualifier	Unit		<u>D</u> .	%Rec	Limits	RPD	Limit
Gasoline Range Organics				1000	1030		mg/Kg			103	70 - 130	11	20
(GRO)-C6-C10				1000	1007		malka			101	70 - 130	5	20
Diesel Range Organics (Over C10-C28)				1000	1007		mg/Kg			101	70 - 130	5	20
010 020)													
	LCSD												
Surrogate	%Recovery	Qua	lifier	Limits									
1-Chlorooctane	115			70 - 130									
o-Terphenyl	99			70 - 130									
Lab Sample ID: 880-23150-A-	-21-E MS									Client S	Sample ID	· Matrix	Snike
Matrix: Solid										onente	-	Type: To	
Analysis Batch: 43108												Batch:	
Analysis Batom Toroo	Sample	Sam	ple	Spike	MS	MS					%Rec	Datoil.	10002
Analyte	Result			Added		Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics	<49.9			999	879.9		mg/Kg			85	70 - 130		
(GRO)-C6-C10							0 0						
Diesel Range Organics (Over	<49.9	U		999	897.0		mg/Kg			87	70 - 130		
C10-C28)													
	MS	мs											
Surrogate	%Recovery	Qua	lifier	Limits									
1-Chlorooctane	97			70 - 130									
o-Terphenyl	82			70 - 130									
-	-21-F MSD						c	lien	t Sa	mple ID:	Matrix Sp		
Lab Sample ID: 880-23150-A- Matrix: Solid	-21-F MSD						c	lien	t Sa	mple ID:	Prep T	Type: To	tal/NA
							c	lien	t Sa	mple ID:	Prep T Prep		tal/NA 43082
Matrix: Solid Analysis Batch: 43108	Sample		-	Spike	MSD			lien		-	Prep T Prep %Rec	Type: To Batch:	tal/NA 43082 RPD
Matrix: Solid Analysis Batch: 43108 <sup>Analyte</sup>	Sample Result	Qua	-	Added	Result	MSD Qualifier	Unit	lien	t Sa	%Rec	Prep T Prep %Rec Limits	Batch:	tal/NA 43082 RPD Limit
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics	Sample	Qua	-					lien		-	Prep T Prep %Rec	Type: To Batch:	tal/NA 43082 RPD
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample Result <49.9	Qual U	-	<b>Added</b> 999	Result 1045		_ <mark>Unit</mark> mg/Kg	lien		<b>%Rec</b>	Prep 7 Prep %Rec Limits 70 - 130	RPD       17	tal/NA 43082 RPD Limit 20
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result	Qual U	-	Added	Result		Unit	lien		%Rec	Prep T Prep %Rec Limits	Batch:	tal/NA 43082 RPD Limit
Matrix: Solid	Sample Result <49.9 <49.9	Qual U U	lifier	<b>Added</b> 999	Result 1045		_ <mark>Unit</mark> mg/Kg	lien		<b>%Rec</b>	Prep 7 Prep %Rec Limits 70 - 130	RPD       17	tal/NA 43082 RPD Limit 20
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Sample Result <49.9 <49.9 MSD	Qual U U	lifier	<b>Added</b> 999 999	Result 1045		_ <mark>Unit</mark> mg/Kg	lien		<b>%Rec</b>	Prep 7 Prep %Rec Limits 70 - 130	RPD       17	tal/NA 43082 RPD Limit 20
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Sample Result <49.9 <49.9 MSD %Recovery	Qual U U	lifier	Added 999 999 Limits	Result 1045		_ <mark>Unit</mark> mg/Kg	lien		<b>%Rec</b>	Prep 7 Prep %Rec Limits 70 - 130	RPD       17	tal/NA 43082 RPD Limit 20
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	Sample Result <49.9 <49.9 MSD %Recovery 118	Qual U U	lifier	Added 999 999 Limits 70 - 130	Result 1045		_ <mark>Unit</mark> mg/Kg	Clien		<b>%Rec</b>	Prep 7 Prep %Rec Limits 70 - 130	RPD       17	tal/NA 43082 RPD Limit 20
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	Sample Result <49.9 <49.9 MSD %Recovery	Qual U U	lifier	Added 999 999 Limits	Result 1045		_ <mark>Unit</mark> mg/Kg	Clien		<b>%Rec</b>	Prep 7 Prep %Rec Limits 70 - 130	RPD       17	tal/NA 43082 RPD Limit 20
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	Sample Result <49.9 <49.9 MSD %Recovery 118 94	Qual U U	lifier	Added 999 999 Limits 70 - 130	Result 1045		_ <mark>Unit</mark> mg/Kg	Clien	<u>D</u> .	<b>%Rec</b> 101 103	Prep 7 Prep %Rec Limits 70 - 130 70 - 130	Type: To Batch: RPD 17 16	tal/NA 43082 RPD Limit 20 20
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-4308	Sample Result <49.9 <49.9 MSD %Recovery 118 94	Qual U U	lifier	Added 999 999 Limits 70 - 130	Result 1045		_ <mark>Unit</mark> mg/Kg		<u>D</u> .	<b>%Rec</b> 101 103	Prep         T           %Rec         Limits           70 - 130         70 - 130           70 - 130         70 - 130	Type: To Batch:	Harris Harrison Harri
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-4308 Matrix: Solid	Sample Result <49.9 <49.9 MSD %Recovery 118 94	Qual U U	lifier	Added 999 999 Limits 70 - 130	Result 1045		_ <mark>Unit</mark> mg/Kg	Clien	<u>D</u> .	<b>%Rec</b> 101 103	Prep         T           %Rec         Limits           70 - 130         70 - 130           70 - 130         Prep I	Type: To Batch: 17 16 Method	Hal/NA 43082 RPD Limit 20 20 Blank
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-4308 Matrix: Solid	Sample Result <49.9 <49.9 MSD %Recovery 118 94	Qual U MSD Qual	lifier	Added 999 999 Limits 70 - 130	Result 1045		_ <mark>Unit</mark> mg/Kg	Clien	<u>D</u> .	<b>%Rec</b> 101 103	Prep         T           %Rec         Limits           70 - 130         70 - 130           70 - 130         Prep I	Type: To Batch:	Hal/NA 43082 RPD Limit 20 20 Blank
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-4308 Matrix: Solid Analysis Batch: 43035	Sample Result <49.9 <49.9 MSD %Recovery 118 94 33/1-A	Qual U MSD Qua	lifier	Added 999 999 Limits 70 - 130	Result 1045		_ <mark>Unit</mark> mg/Kg	D	<u>D</u> .	<b>%Rec</b> 101 103	Prep         T           %Rec         Limits           70 - 130         70 - 130           70 - 130         Prep I	Type: To Batch: Method Type: To Batch:	tal/NA 43082 RPD Limit 20 20 Blank tal/NA 43083
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Sample Result <49.9 <49.9 MSD %Recovery 118 94 33/1-A	Qual U MSD Qua	MB Qualifier	Added 999 999 Limits 70 - 130	Result 1045 1056	Qualifier	_ <mark>Unit</mark> mg/Kg mg/Kg		D Pr	%Rec           101           103	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To Batch: RPD 17 16 Method Type: To Batch: Red	Hal/NA 43082 RPD Limit 20 20 Blank
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-4308 Matrix: Solid Analysis Batch: 43035 Analyte	Sample Result <49.9 <49.9 MSD %Recovery 118 94 33/1-A	Qual U U MSD Qua	MB Qualifier	Added 999 999 Limits 70 - 130	Result 1045 1056	Qualifier	_ <mark>Unit</mark> mg/Kg mg/Kg		D Pr	<sup>%Rec</sup> 101 103 Client Sa	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 Prep T Prep T Prep Analyz	Method Batch: 17 16 Method Type: To Batch: sed	Hank Hankka Hank Hank Hank Hank Hank Hank Hank Hank Hank
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-4308 Matrix: Solid Analysis Batch: 43035 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result <49.9 <49.9 MSD %Recovery 118 94 33/1-A R	Qual U U MSD Qua	MB Qualifier U	Added 999 999 Limits 70 - 130	Result 1045 1056	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg		D 	<sup>%Rec</sup> 101 103 Client Sa	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 Prep T Prep T Prep Analyz	Method Satch: <u>RPD</u> 17 16 Method Type: To Batch: <u>red</u> 21:01	Hank Hankka Hank Hank Hank Hank Hank Hank Hank Hank Hank
Matrix: Solid Analysis Batch: 43108 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-4308 Matrix: Solid Analysis Batch: 43035 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample <u>Result</u> <49.9 <49.9 <i>MSD</i> <i>%Recovery</i> 118 94 33/1-A Result	Qual U U MSD Qual Solo	MB Qualifier U	Added 999 999 Limits 70 - 130	Result           1045           1056           50.0	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg		D Pr 01/03	%Rec           101           103           Client Sa           epared           3/23 13:38	Prep T           Prep %           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           Prep T           Prep T           Prep T           01/03/23 :	Type: To Batch: 17 16 Method Type: To Batch: 21:01	Hank Hankk Hank Hank Hank Hank Hank Hank Hank Hank Hank Hank

# Job ID: 890-3724-1 SDG: 03D2057041

Client: Ensolum Project/Site: SEMU Eumont #117

Lab Sample ID: MB 880-43083/1-A

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

Matrix: Solid									Prep Ty		
Analysis Batch: 43035									Prep B	atch:	4308.
		MB MB									
Surrogate	%Reco	very Qualifier	Limits				F	repared	Analyzed	1	Dil Fa
1-Chlorooctane		109	70 - 130				01/0	)3/23 13:38	01/03/23 21	:01	
o-Terphenyl		111	70 - 130				01/0	3/23 13:38	01/03/23 21	:01	
Lab Sample ID: LCS 880-43	083/2-A						Client	Sample	ID: Lab Con		
Matrix: Solid									Prep Ty		
Analysis Batch: 43035									Prep B	atch:	4308
Analista			Spike		LCS	11	-	0/ <b>D</b> = =	%Rec		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1005		mg/Kg		100	70 - 130		
Diesel Range Organics (Over			1000	966.4		mg/Kg		97	70 - 130		
C10-C28)											
	1.00	1.00									
<b>•</b> • •	LCS										
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	111		70 <u>-</u> 130								
o-Terphenyl	94		70 - 130								
Lab Sample ID: LCSD 880-4	3083/3-A					Clie	ent San	nole ID: I	ab Control	Sample	e Du
Matrix: Solid						one	un oan		Prep Ty		
Analysis Batch: 43035									Prep B		
			Spike	LCSD	LCSD				%Rec	atom	RP
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Gasoline Range Organics			1000	1026		mg/Kg		103	70 - 130	2	2
(GRO)-C6-C10						5 5					
Diesel Range Organics (Over			1000	993.4		mg/Kg		99	70 - 130	3	2
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	95		70 - 130								
-											
Lab Sample ID: 880-23145-4	A-1-C MS							Client	Sample ID: I	<b>Matrix</b>	Spik
Matrix: Solid									Prep Ty	pe: Tot	tal/N/
Analysis Batch: 43035									Prep B	atch:	43 <mark>0</mark> 8
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1036		mg/Kg	_	101	70 - 130		
Diesel Range Organics (Over	<49.9	U	999	897.6		mg/Kg		90	70 - 130		
C10-C28)											
C10-C28)	MS	MS									
	MS %Recovery		Limits								
C10-C28) Surrogate 1-Chlorooctane	MS %Recovery 	Qualifier	Limits								

Client: Ensolum Project/Site: SEMU Eumont #117 Job ID: 890-3724-1 SDG: 03D2057041

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

Matrix: Solid	1-D MSD					, c	ment Sc		): Matrix Sp Brop 1		
Analysis Batch: 43035										Type: Tot Batch:	
Analysis Batch. 43035	Samplo	Sample	Spike	Med	MSD				%Rec	Datch:	43003 RPD
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics	<49.9			1040	Quaimer	mg/Kg		101	70 - 130	0	2
(GRO)-C6-C10	\$45.5	0	333	1040		iiig/itg		101	70 - 100	0	2
Diesel Range Organics (Over C10-C28)	<49.9	U	999	918.8		mg/Kg		92	70 - 130	2	2
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	14	S1-	70 - 130								
o-Terphenyl	11	S1-	70 - 130								
lethod: 300.0 - Anions, Ic Lab Sample ID: MB 880-43076 Matrix: Solid Analysis Batch: 43096		ogrupny						Client S	Sample ID: Prep	Method Type: So	
		MB MB									
Analyte		esult Qualifier		RL	Unit		<u>D</u> P	repared	Analyz		Dil Fa
Chloride	<	<5.00 U		5.00	mg/K	g			01/04/23	05:18	
ah Sample ID: I CS 880-4307	<u>6/2-Δ</u>										
Matrix: Solid	′6/2-A						Chem	Jampie	e ID: Lab Co Prep	Type: So	
Matrix: Solid	′6/2-A		Spike	LCS	LCS		Client	Sample			
Matrix: Solid Analysis Batch: 43096	′6/2-A		Spike Added		LCS Qualifier	Unit	D	%Rec	Prep		
Matrix: Solid Analysis Batch: 43096 <sup>Analyte</sup>	′6/2-A					Unit mg/Kg		·	Prep %Rec		
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid			Added	Result		mg/Kg	<u>D</u>	%Rec 105	Prep %Rec Limits 90 - 110	Type: So	e Du
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid			Added 250	Result 262.3	Qualifier	mg/Kg	<u>D</u>	%Rec 105	Prep %Rec Limits 90 - 110 Lab Contro Prep	Type: So	e Du olub
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096			Added 250 Spike	Result 262.3 LCSD	Qualifier	mg/Kg Clie	D_	%Rec 105	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec	Type: So J Sample Type: So	e Du olubl olubl RP
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte			Added 250	Result 262.3 LCSD	Qualifier	mg/Kg Clie	<u>D</u>	%Rec 105	Prep %Rec Limits 90 - 110 Lab Contro Prep	Type: So	e Du olub olub RP Lim
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte			Added 250 Spike Added	Result 262.3 LCSD Result	Qualifier	mg/Kg Clie	D_	%Rec 105 pple ID: %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits	Type: So ol Sample Type: So 	e Du olubi olubi RP Lim
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte Chloride	 076/3-A		Added 250 Spike Added	Result 262.3 LCSD Result	Qualifier	mg/Kg Clie	D_	%Rec 105 pple ID: %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits	Type: So ol Sample Type: So <u>RPD</u> 1	e Du olubi olubi RP Lim 2
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: 890-3724-1 M	 076/3-A		Added 250 Spike Added	Result 262.3 LCSD Result	Qualifier	mg/Kg Clie	D_	%Rec 105 pple ID: %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa	Type: So ol Sample Type: So <u>RPD</u> 1	e Du olubi RP Lim 2 : FS0
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: 890-3724-1 M: Matrix: Solid	 076/3-A		Added 250 Spike Added	Result 262.3 LCSD Result	Qualifier	mg/Kg Clie	D_	%Rec 105 pple ID: %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa	Type: So ol Sample Type: So 	e Du olubi RP Lim 2 : FS0
Lab Sample ID: LCS 880-4307 Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: 890-3724-1 M: Matrix: Solid Analysis Batch: 43096	 076/3-A		Added 250 Spike Added	Result 262.3 LCSD Result 264.0	Qualifier	mg/Kg Clie	D_	%Rec 105 pple ID: %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa	Type: So ol Sample Type: So 	e Du olubi RP Lim 2 FS0
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: 890-3724-1 Mi Matrix: Solid Analysis Batch: 43096	076/3-A S Sample	Sample Qualifier	Added 250 Spike Added 250	Result 262.3 LCSD Result 264.0	Qualifier LCSD Qualifier	mg/Kg Clie	D_	%Rec 105 pple ID: %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa Prep	Type: So ol Sample Type: So 	e Du olubi RP Lim 2 : FS0
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: 890-3724-1 Mi Matrix: Solid Analysis Batch: 43096 Analyte	076/3-A S Sample	-	Added 250 Spike Added 250 Spike	Result 262.3 LCSD Result 264.0	Qualifier LCSD Qualifier MS	Unit mg/Kg	D_ ent Sam D_	%Rec           105           ople ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa Prep %Rec	Type: So ol Sample Type: So 	e Du olub olub RP Lim 2 : FS0
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: 890-3724-1 MS Matrix: Solid Analysis Batch: 43096 Analyte Chloride	076/3-A S S <u>S</u> <u>S</u> Sample <u>Result</u> 287	-	Added 250 Spike Added 250 Spike Added	Result 262.3 LCSD Result 264.0 MS Result	Qualifier LCSD Qualifier MS	Unit Unit Unit	D_ ent Sam D_	%Rec           105           mple ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa Prep %Rec Limits 90 - 110	Type: So ol Sample Type: So <u>RPD</u> 1 mple ID: Type: So	e Du olubi RP Lim 2 : FS0 olubi
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: 890-3724-1 Mi Matrix: Solid Analysis Batch: 43096 Analyte Chloride	076/3-A S S <u>S</u> <u>S</u> Sample <u>Result</u> 287	-	Added 250 Spike Added 250 Spike Added	Result 262.3 LCSD Result 264.0 MS Result	Qualifier LCSD Qualifier MS	Unit Unit Unit	D_ ent Sam D_	%Rec           105           mple ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa Prep %Rec Limits 90 - 110	Type: So ol Sample Type: So <u>RPD</u> 1 mple ID: Type: So mple ID:	e Du olubi RP Lim 2 : FS0 olubi
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: 890-3724-1 MS Matrix: Solid Analyte Chloride Lab Sample ID: 890-3724-1 MS Matrix: Solid	076/3-A S S <u>S</u> <u>S</u> Sample <u>Result</u> 287	-	Added 250 Spike Added 250 Spike Added	Result 262.3 LCSD Result 264.0 MS Result	Qualifier LCSD Qualifier MS	Unit Unit Unit	D_ ent Sam D_	%Rec           105           mple ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa Prep %Rec Limits 90 - 110	Type: So ol Sample Type: So <u>RPD</u> 1 mple ID: Type: So	e Du olubi RP Lim 2 : FS0 olubi
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: 890-3724-1 Mi Matrix: Solid Analysis Batch: 43096 Analyte Chloride	D76/3-A S S <u>Result</u> 287 SD	Qualifier	Added 250 Spike Added 250 Spike Added 250	Result 262.3 LCSD Result 264.0 MS Result 547.7	Qualifier LCSD Qualifier MS Qualifier	Unit Unit Unit	D_ ent Sam D_	%Rec           105           mple ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa Prep %Rec Limits 90 - 110 Client Sa Prep	Type: So ol Sample Type: So <u>RPD</u> 1 mple ID: Type: So mple ID:	e Du olubl RP Lim 2 : FS0 olubl
Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: LCSD 880-430 Matrix: Solid Analysis Batch: 43096 Analyte Chloride Lab Sample ID: 890-3724-1 MS Matrix: Solid Analyte Chloride Lab Sample ID: 890-3724-1 MS Matrix: Solid	D76/3-A S Sample <u>Result</u> 287 SD Sample	Qualifier	Added 250 Spike Added 250 Spike Added	Result 262.3 LCSD Result 264.0 MS Result 547.7	Qualifier LCSD Qualifier MS	Unit Unit Unit	D_ ent Sam D_	%Rec           105           mple ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa Prep %Rec Limits 90 - 110	Type: So ol Sample Type: So <u>RPD</u> 1 mple ID: Type: So mple ID:	e Du olubi RP Lim 2 : FS0 olubi

Page 117 of 244

# **QC Association Summary**

Client: Ensolum Project/Site: SEMU Eumont #117 Page 118 of 244

5

Job ID: 890-3724-1 SDG: 03D2057041

# **GC VOA**

# Analysis Batch: 43041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3724-1	FS01	Total/NA	Solid	8021B	43160
890-3724-3	FS03	Total/NA	Solid	8021B	43160
890-3724-5	FS05	Total/NA	Solid	8021B	43160
890-3724-6	SW01	Total/NA	Solid	8021B	43160
890-3724-7	SW02	Total/NA	Solid	8021B	43160
MB 880-43080/5-A	Method Blank	Total/NA	Solid	8021B	43080
MB 880-43160/5-A	Method Blank	Total/NA	Solid	8021B	43160
LCS 880-43160/1-A	Lab Control Sample	Total/NA	Solid	8021B	43160
LCSD 880-43160/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43160
880-23145-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	43160
880-23145-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43160

NID 000-43100/3-A		TO(al/INA	3010	00210	43100	
LCS 880-43160/1-A	Lab Control Sample	Total/NA	Solid	8021B	43160	8
LCSD 880-43160/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43160	
880-23145-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	43160	9
880-23145-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43160	
Prep Batch: 43080						10
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	44
MB 880-43080/5-A	Method Blank	Total/NA	Solid	5035		
Prep Batch: 43160						12
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	4.2
890-3724-1	FS01	Total/NA	Solid	5035		T3
		<b>T</b> ( 1010				

### Prep Batch: 43160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3724-1	FS01	Total/NA	Solid	5035	
890-3724-3	FS03	Total/NA	Solid	5035	
890-3724-5	FS05	Total/NA	Solid	5035	
890-3724-6	SW01	Total/NA	Solid	5035	
890-3724-7	SW02	Total/NA	Solid	5035	
MB 880-43160/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43160/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43160/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23145-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-23145-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

# Prep Batch: 43178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3724-2	FS02	Total/NA	Solid	5035	
890-3724-4	FS04	Total/NA	Solid	5035	
MB 880-43178/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43178/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43178/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23188-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-23188-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

# Analysis Batch: 43200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3724-2	FS02	Total/NA	Solid	8021B	43178
890-3724-4	FS04	Total/NA	Solid	8021B	43178
MB 880-43178/5-A	Method Blank	Total/NA	Solid	8021B	43178
LCS 880-43178/1-A	Lab Control Sample	Total/NA	Solid	8021B	43178
LCSD 880-43178/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43178
880-23188-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	43178
880-23188-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43178

# **QC Association Summary**

Client: Ensolum Project/Site: SEMU Eumont #117

Job ID: 890-3724-1 SDG: 03D2057041

# GC VOA

# Analysis Batch: 43230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3724-1	FS01	Total/NA	Solid	Total BTEX	
890-3724-2	FS02	Total/NA	Solid	Total BTEX	
890-3724-3	FS03	Total/NA	Solid	Total BTEX	
890-3724-4	FS04	Total/NA	Solid	Total BTEX	
890-3724-5	FS05	Total/NA	Solid	Total BTEX	
890-3724-6	SW01	Total/NA	Solid	Total BTEX	
890-3724-7	SW02	Total/NA	Solid	Total BTEX	

# GC Semi VOA

Analysis Batch: 43035	5
-----------------------	---

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3724-7	SW02	Total/NA	Solid	8015B NM	43083
MB 880-43083/1-A	Method Blank	Total/NA	Solid	8015B NM	43083
LCS 880-43083/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43083
LCSD 880-43083/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43083
880-23145-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	43083
880-23145-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43083

# Prep Batch: 43082

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3724-1	FS01	Total/NA	Solid	8015NM Prep	
890-3724-2	FS02	Total/NA	Solid	8015NM Prep	
890-3724-3	FS03	Total/NA	Solid	8015NM Prep	
890-3724-4	FS04	Total/NA	Solid	8015NM Prep	
890-3724-5	FS05	Total/NA	Solid	8015NM Prep	
890-3724-6	SW01	Total/NA	Solid	8015NM Prep	
MB 880-43082/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43082/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43082/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23150-A-21-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23150-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

# Prep Batch: 43083

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3724-7	SW02	Total/NA	Solid	8015NM Prep	
MB 880-43083/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43083/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43083/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23145-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23145-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

# Analysis Batch: 43108

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3724-1	FS01	Total/NA	Solid	8015B NM	43082
890-3724-2	FS02	Total/NA	Solid	8015B NM	43082
890-3724-3	FS03	Total/NA	Solid	8015B NM	43082
890-3724-4	FS04	Total/NA	Solid	8015B NM	43082
890-3724-5	FS05	Total/NA	Solid	8015B NM	43082
890-3724-6	SW01	Total/NA	Solid	8015B NM	43082
MB 880-43082/1-A	Method Blank	Total/NA	Solid	8015B NM	43082

# **QC Association Summary**

Client: Ensolum Project/Site: SEMU Eumont #117

# GC Semi VOA (Continued)

# Analysis Batch: 43108 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-43082/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43082
LCSD 880-43082/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43082
880-23150-A-21-E MS	Matrix Spike	Total/NA	Solid	8015B NM	43082
880-23150-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43082
Analysis Batch: 43139					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3724-1	FS01	Total/NA	Solid	8015 NM	
890-3724-2	FS02	Total/NA	Solid	8015 NM	
890-3724-3	FS03	Total/NA	Solid	8015 NM	
890-3724-4	FS04	Total/NA	Solid	8015 NM	
890-3724-5	FS05	Total/NA	Solid	8015 NM	
890-3724-6	SW01	Total/NA	Solid	8015 NM	
890-3724-7	SW02	Total/NA	Solid	8015 NM	

# HPLC/IC

# Leach Batch: 43076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3724-1	FS01	Soluble	Solid	DI Leach	
890-3724-2	FS02	Soluble	Solid	DI Leach	
890-3724-3	FS03	Soluble	Solid	DI Leach	
890-3724-4	FS04	Soluble	Solid	DI Leach	
890-3724-5	FS05	Soluble	Solid	DI Leach	
890-3724-6	SW01	Soluble	Solid	DI Leach	
890-3724-7	SW02	Soluble	Solid	DI Leach	
MB 880-43076/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43076/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43076/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3724-1 MS	FS01	Soluble	Solid	DI Leach	
890-3724-1 MSD	FS01	Soluble	Solid	DI Leach	

# Analysis Batch: 43096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3724-1	FS01	Soluble	Solid	300.0	43076
890-3724-2	FS02	Soluble	Solid	300.0	43076
890-3724-3	FS03	Soluble	Solid	300.0	43076
890-3724-4	FS04	Soluble	Solid	300.0	43076
890-3724-5	FS05	Soluble	Solid	300.0	43076
890-3724-6	SW01	Soluble	Solid	300.0	43076
890-3724-7	SW02	Soluble	Solid	300.0	43076
MB 880-43076/1-A	Method Blank	Soluble	Solid	300.0	43076
LCS 880-43076/2-A	Lab Control Sample	Soluble	Solid	300.0	43076
LCSD 880-43076/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43076
890-3724-1 MS	FS01	Soluble	Solid	300.0	43076
890-3724-1 MSD	FS01	Soluble	Solid	300.0	43076

Page 120 of 244

5

8

# Job ID: 890-3724-1 SDG: 03D2057041

5

9

Job ID: 890-3724-1 SDG: 03D2057041

# Lab Sample ID: 890-3724-1 Matrix: Solid

Date Collected: 12/29/22 11:00 Date Received: 12/29/22 15:31

**Client Sample ID: FS01** 

Project/Site: SEMU Eumont #117

Client: Ensolum

	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	43160	01/04/23 12:33	MNR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	43041	01/05/23 01:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43230	01/05/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43139	01/05/23 12:44	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43082	01/03/23 13:32	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	43108	01/04/23 18:09	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43076	01/03/23 12:06	KS	EET MID
Soluble	Analysis	300.0		1			43096	01/04/23 05:32	СН	EET MID

# **Client Sample ID: FS02**

# Date Collected: 12/29/22 11:05

Date Received: 12/29/22 15:31

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	43178	01/05/23 15:26	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	43200	01/05/23 20:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43230	01/06/23 08:35	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43139	01/05/23 12:44	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43082	01/03/23 13:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43108	01/04/23 18:51	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	43076	01/03/23 12:06	KS	EET MID
Soluble	Analysis	300.0		1			43096	01/04/23 05:46	СН	EET MID

# **Client Sample ID: FS03**

# Date Collected: 12/29/22 11:10

Date Received: 12/29/22 15:31

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	43160	01/04/23 12:33	MNR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	43041	01/05/23 01:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43230	01/05/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43139	01/05/23 12:44	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43082	01/03/23 13:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43108	01/04/23 18:30	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	43076	01/03/23 12:06	KS	EET MID
Soluble	Analysis	300.0		1			43096	01/04/23 05:51	СН	EET MID

# **Client Sample ID: FS04** Date Collected: 12/29/22 11:15 Date Received: 12/29/22 15:31

	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	43178	01/05/23 15:26	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	43200	01/05/23 20:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43230	01/06/23 08:35	AJ	EET MID

**Eurofins Carlsbad** 

Matrix: Solid

# Lab Sample ID: 890-3724-2 Matrix: Solid

Lab Sample ID: 890-3724-3 Matrix: Solid

Lab Sample ID: 890-3724-4

Job ID: 890-3724-1 SDG: 03D2057041

# Lab Sample ID: 890-3724-4 Matrix: Solid

Lab Sample ID: 890-3724-5

Date Collected: 12/29/22 11:15 Date Received: 12/29/22 15:31

**Client Sample ID: FS04** 

Project/Site: SEMU Eumont #117

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			43139	01/05/23 12:44	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	43082	01/03/23 13:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43108	01/04/23 19:12	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	43076	01/03/23 12:06	KS	EET MID
Soluble	Analysis	300.0		1			43096	01/04/23 05:56	СН	EET MID

# Client Sample ID: FS05

# Date Collected: 12/29/22 11:20 Date Received: 12/29/22 15:31

	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	43160	01/04/23 12:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43041	01/05/23 00:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43230	01/05/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43139	01/05/23 12:44	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	43082	01/03/23 13:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43108	01/04/23 19:33	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	43076	01/03/23 12:06	KS	EET MID
Soluble	Analysis	300.0		1			43096	01/04/23 06:01	CH	EET MID

# Client Sample ID: SW01

Date Collected: 12/29/22 12:30 Date Received: 12/29/22 15:31

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	43160	01/04/23 12:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43041	01/05/23 00:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43230	01/05/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43139	01/05/23 12:44	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43082	01/03/23 13:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43108	01/04/23 19:54	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	43076	01/03/23 12:06	KS	EET MID
Soluble	Analysis	300.0		1			43096	01/04/23 06:15	СН	EET MID

# Client Sample ID: SW02

# Date Collected: 12/29/22 12:35 Date Received: 12/29/22 15:31

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	43160	01/04/23 12:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43041	01/05/23 00:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43230	01/05/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43139	01/04/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43083	01/03/23 13:38	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43035	01/04/23 01:45	SM	EET MID

Eurofins Carlsbad

Matrix: Solid

> 11 12 13

# Lab Sample ID: 890-3724-6

Lab Sample ID: 890-3724-7

Matrix: Solid

Matrix: Solid

# Lab Chronicle

Job ID: 890-3724-1 SDG: 03D2057041

# Client Sample ID: SW02 Date Collected: 12/29/22 12:35

Project/Site: SEMU Eumont #117

Client: Ensolum

Date Received: 12/29/22 15:31

	Batch	Batch		Dil	Initial	Final	Batch	Prepared			
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab	5
Soluble	Leach	DI Leach			4.99 g	50 mL	43076	01/03/23 12:06	KS	EET MID	-
Soluble	Analysis	300.0		1			43096	01/04/23 06:19	CH	EET MID	

### Laboratory References:

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

# Lab Sample ID: 890-3724-7

Matrix: Solid

5
8
9

		Accreditation/Co	ertification Summary		
Client: Ensolum Project/Site: SEMU Eur	mont #117			Job ID: 890-3724-1 SDG: 03D2057041	2
Laboratory: Eurofi					
Unless otherwise noted, all a	nalytes for this laboratory	were covered under each acc	reditation/certification below.		
Authority		Program	Identification Number	Expiration Date	
Texas		NELAP	T104704400-22-25	06-30-23	5
The following analytes a	are included in this report	but the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for which	5
the agency does not off		•• • •			
Analysis Method 8015 NM	Prep Method	Matrix Solid	Analyte Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					13

Client: Ensolum Project/Site: SEMU Eumont #117 Job ID: 890-3724-1 SDG: 03D2057041

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
3015B 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
3015NM Prep	Microextraction	SW846	EET MID
OI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
SW846 = '	"Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, Ma Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Ec	•	
TAL SOP =	<ul> <li>TestAmerica Laboratories, Standard Operating Procedure</li> </ul>		
Laboratory Re	eferences:		
EET MID =	Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

### Protocol References:

# Laboratory References:

# **Sample Summary**

Client: Ensolum Project/Site: SEMU Eumont #117 Job ID: 890-3724-1 SDG: 03D2057041

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-3724-1	FS01	Solid	12/29/22 11:00	12/29/22 15:31	4'	- <u> </u>
890-3724-2	FS02	Solid	12/29/22 11:05	12/29/22 15:31	4'	
890-3724-3	FS03	Solid	12/29/22 11:10	12/29/22 15:31	4'	5
890-3724-4	FS04	Solid	12/29/22 11:15	12/29/22 15:31	4'	J
890-3724-5	FS05	Solid	12/29/22 11:20	12/29/22 15:31	4'	
890-3724-6	SW01	Solid	12/29/22 12:30	12/29/22 15:31	0-4'	
890-3724-7	SW02	Solid	12/29/22 12:35	12/29/22 15:31	0-4'	
						8
						9
						12
						13
						1/

Kalei Jennings       Work Order Com         Ensolum, LLC       Program: UST/PST [PRP ] Brownfields         3122 Nat'l Parks Highway       State of Project: NM         Carlsbad, NM 88220       Reporting: Level III ] Level III ] PST/UST         m, kjennings@ensolum.com       Deliverables: EDD ] ADaPT ]         ANALYSIS REQUEST       None:	www.xenco.com     Page     of       Work Order Comments       Program: UST/PST     PRP     Brownfields     IRC     Juperfund     I       State of Project:     NM     Integration of the state of Project:     NM     Integration of the state of Project:     Integration of the state
olum.com	Preservative Codes       NO     DI Water: H2O       Cool     MeOH: Me       HNO3: HN
olum.com ANALYSIS REQU	TRRP Level IV Other: Other: Preservative Codes NO DI Water: H <sub>2</sub> O Cool MeOH: Me HNO <sub>3</sub> : HN
ANALYSIS REQU	
ANALYSIS REQ	Preserva Preserva NC Cool
	eserva
	H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na
	H3PO4: HP
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
	Zn Acetate+NaOH: Zn
	NaOH+Ascorbic Acid: SAPC
	Sample Comments
	CAMPAN COTAHU
Mo Ni K Se	Ag SiO <sub>2</sub> Na Sr TI Sn U V Zn
Cr Co Cu Pb Mn Mo Ni Se Ag II U	Hg: 16317 243.17 7470 7 7471
nco, its affiliates and subcontractors. It assigns standard terms and c ncurred by the client if such losses are due to circumstances beyond t Kenco, but not analyzed. These terms will be enforced unless previous	onditions he control ly negotiated.
Relinquished by: (Signature) Received by	Received by: (Signature) Date/Time
* (	
0	
	Revised Date: 08/25/2020 Rev. 2020 2
	B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se 2d Cr Co Cu Fe Pb Mg Mn Mo Ni K Se 2d Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 2d Cr Co Cu Pb Mn Mn Mo Ni Se Ag Ti U 2d Cr Co Cu Pb Mn Mn Mo Ni Se Ag Ti U 2d Cr Co Cu Pb Mn Mn Mo Ni Se Ag Ti U 2d Cr Co Cu Pb Mn Mn Mn Mi Mi Mn

1/6/2023

Page 127 of 244

5

Job Number: 890-3724-1 SDG Number: 03D2057041

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: Ensolum

# Login Number: 3724 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	

Job Number: 890-3724-1 SDG Number: 03D2057041

List Source: Eurofins Midland

List Creation: 01/03/23 09:51 AM

# Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3724 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	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 2/2/2023 9:39:03 AM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Hadlie Green Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 1/10/2023 1:08:26 PM

# JOB DESCRIPTION

SEMU EUMONT #117 SDG NUMBER 03D2057041

# **JOB NUMBER**

890-3755-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

Received by OCD: 2/2/2023 9:39:03 AM

# **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

RAMER

Generated 1/10/2023 1:08:26 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

SDG: 03D2057041

Laboratory Job ID: 890-3755-1

# **Table of Contents**

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	14
QC Sample Results	15
QC Association Summary	19
Lab Chronicle	22
Certification Summary	25
Method Summary	26
Sample Summary	27
Chain of Custody	28
Receipt Checklists	29

ceivea by OC	D: 2/2/2023 9:39:03 AM	<b>Page 133 of</b>	244
	Definitions/Glossary		
Client: Ensolu	Im	Job ID: 890-3755-1	
Project/Site: S	SEMU EUMONT #117	SDG: 03D2057041	
Qualifiers			3
GC VOA			
Qualifier	Qualifier Description		
*_	LCS and/or LCSD is outside acceptance limits, low biased.		
*1	LCS/LCSD RPD exceeds control limits.		Ę
F1	MS and/or MSD recovery exceeds control limits.		
F2	MS/MSD RPD exceeds control limits		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier S1+	Qualifier Description		
U			8
	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			9
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		4
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		

Eurofins Carlsbad

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

RER

RPD

TEF TEQ

TNTC

RL

4

# Job ID: 890-3755-1 SDG: 03D2057041

# Job ID: 890-3755-1

Client: Ensolum

# Laboratory: Eurofins Carlsbad

Project/Site: SEMU EUMONT #117

### Narrative

Job Narrative 890-3755-1

### Receipt

The samples were received on 1/3/2023 9:34 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 1.6°C

### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: FS06 (890-3755-1), FS07 (890-3755-2), FS08 (890-3755-3), FS09 (890-3755-4), FS10 (890-3755-5), FS11 (890-3755-6), FS12 (890-3755-7), SW03 (890-3755-8) and SW04 (890-3755-9).

### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-43278 and analytical batch 880-43470 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: FS12 (890-3755-7) and SW03 (890-3755-8). 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.

RL

Unit

D

Prepared

Dil Fac

Job ID: 890-3755-1 SDG: 03D2057041

# **Client Sample ID: FS06**

Project/Site: SEMU EUMONT #117

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

Result Qualifier

Date Collected: 12/30/22 09:10 Date Received: 01/03/23 09:34

Sample Depth: 4'

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

o-Xylene

Xylenes, Total

Surrogate

Client: Ensolum

Analyte

Lab Sample ID: 890-3755-1 Matrix: Solid

Analyzed

5

/			=	•	-		/	
Benzene	<0.0399	U *- *1	0.0399	mg/Kg		01/05/23 14:02	01/09/23 15:06	20
Toluene	<0.0399	U	0.0399	mg/Kg		01/05/23 14:02	01/09/23 15:06	20
Ethylbenzene	<0.0399	U	0.0399	mg/Kg		01/05/23 14:02	01/09/23 15:06	20
m-Xylene & p-Xylene	<0.0798	U	0.0798	mg/Kg		01/05/23 14:02	01/09/23 15:06	20
o-Xylene	<0.0399	U	0.0399	mg/Kg		01/05/23 14:02	01/09/23 15:06	20
Xylenes, Total	<0.0798	U	0.0798	mg/Kg		01/05/23 14:02	01/09/23 15:06	20
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			01/05/23 14:02	01/09/23 15:06	20
1,4-Difluorobenzene (Surr)	83		70 - 130			01/05/23 14:02	01/09/23 15:06	20
Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0798	U	0.0798	mg/Kg			01/09/23 16:14	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	304		50.0	mg/Kg			01/05/23 12:50	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/04/23 11:55	01/05/23 03:23	1
Diesel Range Organics (Over C10-C28)	304		50.0	mg/Kg		01/04/23 11:55	01/05/23 03:23	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/04/23 11:55	01/05/23 03:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130			01/04/23 11:55	01/05/23 03:23	1
o-Terphenyl	116		70 - 130			01/04/23 11:55	01/05/23 03:23	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - S	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.4		5.03	mg/Kg			01/06/23 22:33	1
Client Sample ID: FS07						Lab Sar	nple ID: 890-	3755-2
ate Collected: 12/30/22 09:15							Matri	ix: Solid
ate Received: 01/03/23 09:34								
Sample Depth: 4'								
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC	)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U *- *1	0.0398	mg/Kg		01/05/23 14:02	01/09/23 15:26	20
Toluene	<0.0398	U	0.0398	mg/Kg		01/05/23 14:02	01/09/23 15:26	20
Ethylbenzene	<0.0398	U	0.0398	mg/Kg		01/05/23 14:02	01/09/23 15:26	20

<0.0797 U

<0.0398 U

<0.0797 U

%Recovery Qualifier

97

0.0797

0.0398

0.0797

Limits

70 - 130

mg/Kg

mg/Kg

mg/Kg

01/05/23 14:02

01/05/23 14:02

01/05/23 14:02

Prepared

01/05/23 14:02

01/09/23 15:26

01/09/23 15:26

01/09/23 15:26

Analyzed

01/09/23 15:26

1/10/2023

Eurofins Carlsbad

20

20

20

20

Dil Fac

# **Client Sample Results**

Job ID: 890-3755-1 SDG: 03D2057041

Lab Sample ID: 890-3755-2

Lab Sample ID: 890-3755-3

Matrix: Solid

# Client Sample ID: FS07

Project/Site: SEMU EUMONT #117

Date Collected: 12/30/22 09:15 Date Received: 01/03/23 09:34

Sample Depth: 4'

Client: Ensolum

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

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	85		70 - 130			01/05/23 14:02	01/09/23 15:26	20
Method: TAL SOP Total BTEX - T	otal BTEX Calo	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0797	U	0.0797	mg/Kg			01/09/23 16:14	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	192		50.0	mg/Kg			01/05/23 12:50	1
	el Range Orga							
	152		00.0					
Method: SW846 8015B NM - Dies Analyte	el Range Orga	nics (DRO) Qualifier		Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	el Range Orga	Qualifier	(GC)		<u>D</u>	Prepared 01/04/23 11:55	Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	el Range Orga Result <50.0	Qualifier	(GC) <u>RL</u> 50.0	Unit mg/Kg	D	01/04/23 11:55	01/05/23 03:44	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	el Range Orga Result	Qualifier	(GC)	<u>Unit</u>	<u> </u>	<u> </u>		Dil Fac
Method: SW846 8015B NM - Dies	el Range Orga Result <50.0	Qualifier U	(GC) <u>RL</u> 50.0	Unit mg/Kg	<u>D</u>	01/04/23 11:55	01/05/23 03:44	Dil Fac 1 1
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36)	el Range Orga Result <50.0 192	Qualifier U	(GC) <u>RL</u> 50.0 50.0	Unit mg/Kg mg/Kg	<u>D</u>	01/04/23 11:55 01/04/23 11:55	01/05/23 03:44 01/05/23 03:44	Dil Fac 1 1 Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<b>Sel Range Orga</b> <u>Result</u> <50.0 <b>192</b> <50.0	Qualifier U	(GC) <u>RL</u> 50.0 50.0 50.0	Unit mg/Kg mg/Kg	D	01/04/23 11:55 01/04/23 11:55 01/04/23 11:55	01/05/23 03:44 01/05/23 03:44 01/05/23 03:44	1

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	118	5.00	mg/Kg			01/06/23 22:51	1

# Client Sample ID: FS08

Date Collected: 12/30/22 09:20 Date Received: 01/03/23 09:34 Sample Depth: 4'

#### Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Benzene 0.00215 \*- \*1 0.00199 mg/Kg 01/05/23 14:02 01/09/23 12:43 Toluene <0.00199 U 0.00199 01/05/23 14:02 01/09/23 12:43 mg/Kg 1 Ethylbenzene <0.00199 U 0.00199 mg/Kg 01/05/23 14:02 01/09/23 12:43 0.00398 01/05/23 14:02 01/09/23 12:43 m-Xylene & p-Xylene mg/Kg 0.00440 1 o-Xylene <0.00199 U 0.00199 mg/Kg 01/05/23 14:02 01/09/23 12:43 1 0.00440 0.00398 mg/Kg 01/05/23 14:02 01/09/23 12:43 **Xylenes**, Total 1 %Recovery Qualifier Limits Dil Fac Surrogate Prepared Analvzed 70 - 130 01/05/23 14:02 01/09/23 12:43 4-Bromofluorobenzene (Surr) 84 1 1,4-Difluorobenzene (Surr) 106 70 - 130 01/05/23 14:02 01/09/23 12:43 1 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL Unit D Dil Fac Prepared Analyzed 0.00655 0.00398 01/09/23 14:58 **Total BTEX** mg/Kg 1 Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac **Total TPH** 81.<mark>9</mark> 49.9 mg/Kg 01/05/23 12:50 1

Eurofins Carlsbad

Matrix: Solid

Job ID: 890-3755-1 SDG: 03D2057041

Analyzed

Lab Sample ID: 890-3755-4

Matrix: Solid

- -

# **Client Sample ID: FS08**

Project/Site: SEMU EUMONT #117

Date Collected: 12/30/22 09:20 Date Received: 01/03/23 09:34

Sample Depth: 4'

Client: Ensolum

#### Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL ~ ~

o-Terphenyl	114		70 - 130		01/04/23 11:55	01/05/23 04:06	1
1-Chlorooctane	111		70 - 130		01/04/23 11:55	01/05/23 04:06	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg	01/04/23 11:55	01/05/23 04:06	1
Diesel Range Organics (Over C10-C28)	81.9		49.9	mg/Kg	01/04/23 11:55	01/05/23 04:06	1
(GRO)-C6-C10							
Gasoline Range Organics	<49.9	U	49.9	mg/Kg	01/04/23 11:55	01/05/23 04:06	1

Unit

D

Prepared

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.97	U	4.97	mg/Kg			01/06/23 22:57	1

# **Client Sample ID: FS09**

# Date Collected: 12/30/22 09:25

# Date Received: 01/03/23 09:34

Sample Depth: 4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200	mg/Kg		01/05/23 14:02	01/09/23 13:03	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/05/23 14:02	01/09/23 13:03	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/05/23 14:02	01/09/23 13:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/05/23 14:02	01/09/23 13:03	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/05/23 14:02	01/09/23 13:03	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/05/23 14:02	01/09/23 13:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			01/05/23 14:02	01/09/23 13:03	1
1,4-Difluorobenzene (Surr)	99		70 - 130			01/05/23 14:02	01/09/23 13:03	1
Method: TAL SOP Total BTEX - 1 Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Diese	Result <0.00400 el Range Organ	Qualifier	0.00400 GC)	mg/Kg		<u>·</u>	01/09/23 14:58	Dil Fac
Analyte Total BTEX	Result <0.00400 el Range Organ	Qualifier U ics (DRO) ( Qualifier	0.00400		<u>D</u>	Prepared Prepared		
Analyte Total BTEX Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	el Range Organ Result <0.00400 el Range Organ         	Qualifier U ics (DRO) ( Qualifier U nics (DRO) Qualifier	0.00400 GC) RL 49.9	mg/Kg Unit		<u>·</u>	01/09/23 14:58	Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte	el Range Organ Result <49.9 sel Range Orga Result Result	Qualifier U ics (DRO) (1 Qualifier U nics (DRO) Qualifier U	0.00400 GC) RL 49.9 (GC) RL	mg/Kg Unit mg/Kg Unit	D	Prepared	01/09/23 14:58 Analyzed 01/05/23 12:50 Analyzed	Dil Fac

#### Dil Fac %Recovery Qualifier Limits Prepared Surrogate Analyzed 01/04/23 11:55 1-Chlorooctane 70 - 130 01/05/23 04:27 118 1 o-Terphenyl 120 70 - 130 01/04/23 11:55 01/05/23 04:27 1

**Eurofins Carlsbad** 

Released to Imaging: 2/20/2023 2:06:44 PM

		Clier	nt Sample Re	sults				
Client: Ensolum							Job ID: 890	
Project/Site: SEMU EUMONT #117							SDG: 03D2	205704
Client Sample ID: FS09						Lab Sar	nple ID: 890-	3755-4
Date Collected: 12/30/22 09:25	-							ix: Solid
Date Received: 01/03/23 09:34								
Sample Depth: 4'								
_								
Method: MCAWW 300.0 - Anions	1		oluble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	<5.05	U	5.05	mg/Kg			01/06/23 23:04	
Client Sample ID: FS10						Lab Sar	nple ID: 890-	3755-5
Date Collected: 12/30/22 09:30							-	x: Solic
Date Received: 01/03/23 09:34								
Sample Depth: 4'								
_								
Method: SW846 8021B - Volatile Analyte		OUNDS (GC Qualifier	) RL	Unit	D	Broporod	Analyzad	Dil Fac
Benzene	<del></del>	-	0.00201			Prepared 01/05/23 14:02	Analyzed 01/09/23 13:24	
Toluene	<0.00201		0.00201	mg/Kg		01/05/23 14:02	01/09/23 13:24	1
Ethylbenzene	<0.00201		0.00201	mg/Kg		01/05/23 14:02	01/09/23 13:24	
	<0.00201			mg/Kg			01/09/23 13:24	
m-Xylene & p-Xylene	<0.00402		0.00402 0.00201	mg/Kg		01/05/23 14:02 01/05/23 14:02	01/09/23 13:24	
o-Xylene	<0.00201			mg/Kg				
Xylenes, Total	<0.00402	0	0.00402	mg/Kg		01/05/23 14:02	01/09/23 13:24	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			01/05/23 14:02	01/09/23 13:24	1
1,4-Difluorobenzene (Surr)	106		70 - 130			01/05/23 14:02	01/09/23 13:24	1
_ Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg		·	01/09/23 14:58	1
_								
Method: SW846 8015 NM - Diese								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	60.6		50.0	mg/Kg			01/05/23 12:50	1
- Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0		50.0	mg/Kg		01/04/23 11:55	01/05/23 04:48	
(GRO)-C6-C10								
Diesel Range Organics (Over	60.6		50.0	mg/Kg		01/04/23 11:55	01/05/23 04:48	
C10-C28)						0.110.1105 ==	0.1/05/05 51 15	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/04/23 11:55	01/05/23 04:48	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane			70 - 130			01/04/23 11:55	01/05/23 04:48	·
o-Terphenyl	121		70 - 130			01/04/23 11:55	01/05/23 04:48	1
		-						
Method: MCAWW 300.0 - Anions	1			Unit	<b>_</b>	Bronorod	Analyzed	
Analyte	Kesuit	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac

Eurofins Carlsbad

01/06/23 23:10

Chloride

4.99

mg/Kg

<4.99 U

Job ID: 890-3755-1 SDG: 03D2057041

# **Client Sample ID: FS11**

Project/Site: SEMU EUMONT #117

Date Collected: 12/30/22 09:35 Date Received: 01/03/23 09:34

Sample Depth: 4'

Client: Ensolum

# Lab Sample ID: 890-3755-6

Matrix: Solid

Analyzed 01/09/23 13:44 01/09/23 13:44 01/09/23 13:44 01/09/23 13:44 01/09/23 13:44	Dil Fac
01/09/23 13:44 01/09/23 13:44 01/09/23 13:44	1
01/09/23 13:44 01/09/23 13:44	
01/09/23 13:44	1
	1
01/09/23 13:44	1
	1
01/09/23 13:44	1
Analyzed	Dil Fac
01/09/23 13:44	1
01/09/23 13:44	1
Analyzed	Dil Fac
01/09/23 15:23	1
Analyzed	Dil Fac
01/05/23 12:50	1
Analyzed	
·	Dil Fac
01/05/23 05:09	1
01/05/23 05:09	1
01/05/23 05:09	1
Analyzed	Dil Fac
01/05/23 05:09	1
01/05/23 05:09	1
	Dil Fac
Analyzed	
Analyzed 01/06/23 23:28	1
·	
01/06/23 23:28	
01/06/23 23:28	3755-7
01/06/23 23:28	3755-7
01/06/23 23:28	3755-7
01/06/23 23:28 mple ID: 890- Matri	3755-7 ix: Solid
01/06/23 23:28 mple ID: 890- Matri Analyzed	3755-7 ix: Solid Dil Fac
01/06/23 23:28 mple ID: 890- Matri Matri 01/09/23 14:04	3755-7 ix: Solid Dil Fac
01/06/23 23:28 mple ID: 890- Matri 01/09/23 14:04 01/09/23 14:04	3755-7 ix: Solid Dil Fac
01/06/23 23:28 mple ID: 890- Matri 01/09/23 14:04 01/09/23 14:04 01/09/23 14:04	3755-7 ix: Solid Dil Fac
01/06/23 23:28 mple ID: 890- Matri 01/09/23 14:04 01/09/23 14:04 01/09/23 14:04 01/09/23 14:04	3755-7 ix: Solid Dil Fac
01/06/23 23:28 mple ID: 890- Matri 01/09/23 14:04 01/09/23 14:04 01/09/23 14:04	3755-7 ix: Solid Dil Fac
_	01/09/23 13:44           01/09/23 13:44           01/09/23 13:44           01/09/23 13:44           Analyzed           01/09/23 13:44           01/09/23 13:44           Analyzed           01/09/23 15:23           Analyzed           01/05/23 12:50           Analyzed           01/05/23 05:09           01/05/23 05:09           01/05/23 05:09           01/05/23 05:09           01/05/23 05:09

Xylenes, Total	<0.00398	U	0.00398	mg/Kg	01/05/23 14:02	01/09/23 14:04	1
Surrogate 4-Bromofluorobenzene (Surr)	%Recovery 112	Qualifier	Limits 70 - 130		Prepared 01/05/23 14:02	Analyzed 01/09/23 14:04	Dil Fac

Eurofins Carlsbad

Released to Imaging: 2/20/2023 2:06:44 PM

# **Client Sample Results**

Job ID: 890-3755-1 SDG: 03D2057041

Lab Sample ID: 890-3755-7

# **Client Sample ID: FS12**

Project/Site: SEMU EUMONT #117

Date Collected: 12/30/22 09:40 Date Received: 01/03/23 09:34

# Sample Depth: 4'

Client: Ensolum

Method: SW846 8021B - Volatile Organic Compound	te (GC) (Continued)
Method. 00040 0021D - Volatile Organic Compound	

Surrogate 1,4-Difluorobenzene (Surr)	% <b>Recovery</b> 105	Qualifier	Limits			Prepared 01/05/23 14:02	Analyzed 01/09/23 14:04	Dil Fac
Method: TAL SOP Total BTE	EX - Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/09/23 15:23	1
Method: SW846 8015 NM - I	Diesel Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/05/23 12:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		01/04/23 11:55	01/05/23 05:31	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		01/04/23 11:55	01/05/23 05:31	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/04/23 11:55	01/05/23 05:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	133	S1+	70 - 130			01/04/23 11:55	01/05/23 05:31	1
o-Terphenyl	134	S1+	70 - 130			01/04/23 11:55	01/05/23 05:31	1

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

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 U	5.00	mg/Kg			01/06/23 23:34	1

# **Client Sample ID: SW03**

Date Collected: 12/30/22 09:45 Date Received: 01/03/23 09:34 Sample Depth: 0-4'

# Lab Sample ID: 890-3755-8

Matrix: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *- *1	0.00199	mg/Kg		01/05/23 14:02	01/09/23 14:25	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/05/23 14:02	01/09/23 14:25	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/05/23 14:02	01/09/23 14:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/05/23 14:02	01/09/23 14:25	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/05/23 14:02	01/09/23 14:25	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/05/23 14:02	01/09/23 14:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			01/05/23 14:02	01/09/23 14:25	1
1,4-Difluorobenzene (Surr)	106		70 - 130			01/05/23 14:02	01/09/23 14:25	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/09/23 15:23	1
Method: SW846 8015 NM - Die	esel Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Page 140 of 244

Matrix: Solid

5

# Released to Imaging: 2/20/2023 2:06:44 PM

Job ID: 890-3755-1 SDG: 03D2057041

Matrix: Solid

Dil Fac

1

1

1

1

1

Dil Fac

Matrix: Solid

Lab Sample ID: 890-3755-8

01/05/23 05:52

Lab Sample ID: 890-3755-9

01/05/23 12:50

01/04/23 11:55

# Client Sample ID: SW03

Project/Site: SEMU EUMONT #117

Date Collected: 12/30/22 09:45 Date Received: 01/03/23 09:34

Sample Depth: 0-4'

Client: Ensolum

 Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)				
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/04/23 11:55	01/05/23 05:52
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/04/23 11:55	01/05/23 05:52
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/04/23 11:55	01/05/23 05:52
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed
1-Chlorooctane	128		70 - 130			01/04/23 11:55	01/05/23 05:52

132 S1+

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

Wethou. WCAWW 500.0 - Amons, I	on chiomato	grapity - Sc	luble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.02	U	5.02	mg/Kg			01/06/23 23:41	1

70 - 130

# Client Sample ID: SW04

# Date Collected: 12/30/22 09:50

# Date Received: 01/03/23 09:34

Sample	e De	pth:	0-4'

Total TPH

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200	mg/Kg		01/05/23 14:02	01/09/23 17:17	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/05/23 14:02	01/09/23 17:17	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/05/23 14:02	01/09/23 17:17	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/05/23 14:02	01/09/23 17:17	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/05/23 14:02	01/09/23 17:17	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/05/23 14:02	01/09/23 17:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			01/05/23 14:02	01/09/23 17:17	1
1,4-Difluorobenzene (Surr)	108		70 - 130			01/05/23 14:02	01/09/23 17:17	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			01/10/23 13:52	1
Method: SW846 8015 NM - Die	esel Range Organ	ics (DRO) (	GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

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

<49.9 U

ei Kaliye Orga	inics (DRO)						
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<49.9	U	49.9	mg/Kg		01/04/23 11:55	01/05/23 06:13	1
<49.9	U	49.9	mg/Kg		01/04/23 11:55	01/05/23 06:13	1
<49.9	U	49.9	mg/Kg		01/04/23 11:55	01/05/23 06:13	1
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
		70 - 130			01/04/23 11:55	01/05/23 06:13	1
124		70 - 130			01/04/23 11:55	01/05/23 06:13	1
	Result           <49.9	Result         Qualifier           <49.9	<49.9	Result         Qualifier         RL         Unit           <49.9	Result         Qualifier         RL         Unit         D           <49.9	Result         Qualifier         RL         Unit         D         Prepared           <49.9	Result         Qualifier         RL         Unit         D         Prepared         Analyzed           <49.9

49.9

mg/Kg

Eurofins Carlsbad

5

		Client	Sample Res	sults					1
Client: Ensolum Project/Site: SEMU EUMONT #117									
Client Sample ID: SW04 Date Collected: 12/30/22 09:50						Lab Sa	mple ID: 890- Matri	3755-9 ix: Solid	3
Date Received: 01/03/23 09:34 Sample Depth: 0-4'									4
Method: MCAWW 300.0 - Anions, Ion Analyte		o <mark>graphy - Solu</mark> Qualifier	uble RL	Unit	D	Prepared	Analyzed	Dil Fac	5
Chloride	5.91		5.01	mg/Kg		Fieparea	01/06/23 23:47	1	6
									7
									8
									9
									10
									11
									13
									14

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

-			
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3754-A-1-D MS	Matrix Spike	112	108
890-3754-A-1-E MSD	Matrix Spike Duplicate	108	97
890-3755-1	FS06	101	83
890-3755-2	FS07	97	85
890-3755-3	FS08	84	106
890-3755-4	FS09	108	99
890-3755-5	FS10	108	106
890-3755-6	FS11	108	96
890-3755-7	FS12	112	105
890-3755-8	SW03	108	106
890-3755-9	SW04	103	108
LCS 880-43278/1-A	Lab Control Sample	97	105
LCSD 880-43278/2-A	Lab Control Sample Dup	98	104
MB 880-43278/5-A	Method Blank	99	105
Surrogate Legend			
BFB = 4-Bromofluorober	nzene (Surr)		
DFBZ = 1,4-Difluorobenz	zene (Surr)		

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

Matrix: Solid

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-23272-A-1-F MS	Matrix Spike	107	103
880-23272-A-1-G MSD	Matrix Spike Duplicate	109	106
890-3755-1	FS06	113	116
890-3755-2	FS07	113	118
890-3755-3	FS08	111	114
890-3755-4	FS09	118	120
890-3755-5	FS10	117	121
890-3755-6	FS11	115	121
890-3755-7	FS12	133 S1+	134 S1+
890-3755-8	SW03	128	132 S1+
890-3755-9	SW04	117	124
LCS 880-43158/2-A	Lab Control Sample	87	87
LCSD 880-43158/3-A	Lab Control Sample Dup	88	89
MB 880-43158/1-A	Method Blank	109	123

# Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

Prep Type: Total/NA

Page 143 of 244

Client: Ensolum Project/Site: SEMU EUMONT #117

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

Lab Sample ID: MB 880-43278/5-A
Matrix: Calid

### Matrix: Solid Analysis Batch: 43470

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200	mg/Kg		01/05/23 14:02	01/09/23 11:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/05/23 14:02	01/09/23 11:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/05/23 14:02	01/09/23 11:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/05/23 14:02	01/09/23 11:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/05/23 14:02	01/09/23 11:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/05/23 14:02	01/09/23 11:53	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			01/05/23 14:02	01/09/23 11:53	1
1,4-Difluorobenzene (Surr)	105		70 - 130			01/05/23 14:02	01/09/23 11:53	1

# Lab Sample ID: LCS 880-43278/1-A Matrix: Solid

# Analysis Batch: 43470

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09305		mg/Kg		93	70 - 130	
Toluene	0.100	0.09058		mg/Kg		91	70 - 130	
Ethylbenzene	0.100	0.08861		mg/Kg		89	70 - 130	
m-Xylene & p-Xylene	0.200	0.1816		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.08741		mg/Kg		87	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

# Lab Sample ID: LCSD 880-43278/2-A

# Matrix: Solid

Analysis Batch: 43470					Prep Batch: 43278				
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09786		mg/Kg		98	70 - 130	5	35
Toluene	0.100	0.09409		mg/Kg		94	70 - 130	4	35
Ethylbenzene	0.100	0.09315		mg/Kg		93	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1927		mg/Kg		96	70 - 130	6	35
o-Xylene	0.100	0.09182		mg/Kg		92	70 - 130	5	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

### Lab Sample ID: 890-3754-A-1-D MS striv: Solid

Matrix: Solid									Prep T	ype: Total/NA
Analysis Batch: 43470									Prep	Batch: 43278
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F2 F1 *-	0.101	0.002879	F1	mg/Kg		2	70 - 130	
		*1								

# Job ID: 890-3755-1 SDG: 03D2057041

Prep Type: Total/NA

Prep Batch: 43278

**Client Sample ID: Method Blank** 

# **Client Sample ID: Lab Control Sample**

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 43278

**Client Sample ID: Matrix Spike**
# **QC Sample Results**

Client: Ensolum Project/Site: SEMU EUMONT #117

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

Lab Sample ID: 890-3754-A-1 Matrix: Solid	-D MS							Client	Sample ID Prep 1	: Matrix Type: To	
Analysis Batch: 43470										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Toluene	<0.00201	U F2 F1	0.101	0.004331	F1	mg/Kg		4	70 - 130		
Ethylbenzene	<0.00201	U F2 F1	0.101	0.005925	F1	mg/Kg		6	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.202	0.005616	F1	mg/Kg		2	70 - 130		
o-Xylene	<0.00201	U F2 F1	0.101	0.01014	F1	mg/Kg		9	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	112		70 - 130								
1,4-Difluorobenzene (Surr)	108		70 - 130								
Lab Sample ID: 890-3754-A-1	-E MSD					Cli	iont Sa	amnlo IF	): Matrix Sp	niko Dur	licato
Matrix: Solid										ype: To	
Analysis Batch: 43470										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F2 F1 *-	0.0990	<0.00198	U F2 F1	mg/Kg		0.1	70 - 130	120	35
		*1									
Toluene	<0.00201	U F2 F1	0.0990	0.002376	F2 F1	mg/Kg		2	70 - 130	58	35
Ethylbenzene	<0.00201	U F2 F1	0.0990	0.002880	F2 F1	mg/Kg		3	70 - 130	69	35
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.198	<0.00396	U F2 F1	mg/Kg		0.5	70 - 130	77	35
o-Xylene	<0.00201	U F2 F1	0.0990	0.002131	F2 F1	mg/Kg		1	70 - 130	131	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

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

	A					Client Sa	mple ID: Metho	d Blank
Matrix: Solid							Prep Type: 1	Total/NA
Analysis Batch: 43110							Prep Batch	n: 43158
-	MB	МВ					-	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/04/23 11:55	01/04/23 20:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/04/23 11:55	01/04/23 20:37	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/04/23 11:55	01/04/23 20:37	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130			01/04/23 11:55	01/04/23 20:37	1
o-Terphenyl	123		70 - 130			01/04/23 11:55	01/04/23 20:37	1
_ Lab Sample ID: LCS 880-43158/2 Matrix: Solid	?-A				C	lient Sample I	D: Lab Control Prep Type: 1	

#### Prep Batch: 43158 Analysis Batch: 43110 LCS LCS %Rec Spike Analyte Added **Result Qualifier** Unit D %Rec Limits Gasoline Range Organics 1000 819.5 mg/Kg 82 70 - 130

(GRO)-C6-C10

Job ID: 890-3755-1 SDG: 03D2057041

Page 145 of 244

6 7 8

# **QC Sample Results**

Client: Ensolum

Project/Site: SEMU EUMONT #117

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

		• ·	,,,,,		,						
Lab Sample ID: LCS 880-43	158/2-A						Client	Sample	ID: Lab C		
Matrix: Solid										Type: To	
Analysis Batch: 43110			0.11							Batch:	43158
• • •			Spike		LCS		_		%Rec		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Diesel Range Organics (Over C10-C28)			1000	853.8		mg/Kg		85	70 - 130		
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	87		70 - 130								
o-Terphenyl	87		70 - 130								
_											
Lab Sample ID: LCSD 880-4	3158/3-A					Clie	nt Sam	iple ID: I	Lab Contro	I Sampl	e Dup
Matrix: Solid									Prep 1	Гуре: То	tal/NA
Analysis Batch: 43110									Prep	Batch:	43158
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	813.3		mg/Kg		81	70 - 130	1	20
(GRO)-C6-C10			4000	044.0				~ 4	70 100		00
Diesel Range Organics (Over C10-C28)			1000	844.6		mg/Kg		84	70 - 130	1	20
	1000	LCSD									
Surrogata			Limits								
Surrogate 1-Chlorooctane	%Recovery 	Quaimer	70 - 130								
o-Terphenyl	89		70 - 130 70 - 130								
	03		10 - 150								
Lab Sample ID: 880-23272-4	A-1-F MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid										Type: To	
Analysis Batch: 43110										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9	U	999	936.3		mg/Kg		91	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	999	1134		mg/Kg		111	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	103		70 - 130								
_ Lab Sample ID: 880-23272-/						~	liont C	ample IF	): Matrix Sp	aiko Dur	licate
Matrix: Solid							inerit 30	ample IL		лке Бир Гуре: То	
										Batch:	
Analysis Batch: 43110	Sample	Sample	Spike	MSD	MSD				%Rec	BatCII:	43156 RPD
Analyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics				932.2		mg/Kg			70 - 130	0	20
(GRO)-C6-C10		5	000	JJZ.Z		mgnyg		30	70 - 100	Ū	20
Diesel Range Organics (Over	<49.9	U	999	1153		mg/Kg		112	70 - 130	2	20
C10-C28)											
	MSD	MSD									
Surrogate	%Recovery		Limits								
		quanner									

Job ID: 890-3755-1

SDG: 03D2057041

Released to Imaging: 2/20/2023 2:06:44 PM

1-Chlorooctane

o-Terphenyl

70 - 130

70 - 130

109

106

Client: Ensolum

# **QC Sample Results**

#### Job ID: 890-3755-1 SDG: 03D2057041

Project/Site: SEMU EUMONT #117

Lab Sample ID: MB 880-43226/1-A									Client	Sample ID:	Method	Blanl
Matrix: Solid										Prep	Type: S	oluble
Analysis Batch: 43376												
		MB MB										
Analyte	R	esult Qualifier		RL		Unit		D	Prepared	Analy	zed	Dil Fa
Chloride	<	<5.00 U		5.00		mg/Kg	3			01/06/23	22:14	
Lab Sample ID: LCS 880-43226/2-A								Clier	nt Sampl	e ID: Lab C	ontrol S	ampl
Matrix: Solid										Prep	Type: S	olubl
Analysis Batch: 43376												
			Spike	I	_cs	LCS				%Rec		
Analyte			Added	Re	sult	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	25	56.5		mg/Kg		103	90 - 110		
Lab Sample ID: LCSD 880-43226/3	A						CI	ient Sa	mple ID:	Lab Contro	ol Sampl	le Du
Matrix: Solid										Prep	Type: S	olub
Analysis Batch: 43376												
			Spike	LC	SD	LCSD				%Rec		RF
Analyte			Added	Re	sult	Qualifier	Unit	D	%Rec	Limits	RPD	Lin
Chloride			250	26	65.6		mg/Kg		106	90 - 110	3	2
Lab Sample ID: 890-3755-1 MS										Client Sa	mple ID:	: FS(
Matrix: Solid										Prep	Type: S	olub
Analysis Batch: 43376												
	Sample	Sample	Spike		MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Re	sult	Qualifier	Unit	D	%Rec	Limits		
Chloride	10.4		252	25	57.0		mg/Kg		98	90 _ 110		
Lab Sample ID: 890-3755-1 MSD										Client Sa	mple ID:	: FS(
Matrix: Solid										Prep	Type: S	olub
Analysis Batch: 43376												
	Sample	Sample	Spike	Ν	ISD	MSD				%Rec		RF
Analyte	Result	Qualifier	Added	Re	sult	Qualifier	Unit	D	%Rec	Limits	RPD	Lin
Chloride	10.4		252	2	79.6		mg/Kg		107	90 - 110	8	2

Eurofins Carlsbad

Client: Ensolum Project/Site: SEMU EUMONT #117

#### Job ID: 890-3755-1 SDG: 03D2057041

# **GC VOA**

## Prep Batch: 43278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3755-1	FS06	Total/NA	Solid	5035	
890-3755-2	FS07	Total/NA	Solid	5035	
890-3755-3	FS08	Total/NA	Solid	5035	
890-3755-4	FS09	Total/NA	Solid	5035	
890-3755-5	FS10	Total/NA	Solid	5035	
890-3755-6	FS11	Total/NA	Solid	5035	
890-3755-7	FS12	Total/NA	Solid	5035	
890-3755-8	SW03	Total/NA	Solid	5035	
890-3755-9	SW04	Total/NA	Solid	5035	
MB 880-43278/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43278/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43278/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3754-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3754-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 43470

890-3755-7	FS12	Total/NA	Solid	5035		
890-3755-8	SW03	Total/NA	Solid	5035		8
890-3755-9	SW04	Total/NA	Solid	5035		
MB 880-43278/5-A	Method Blank	Total/NA	Solid	5035		9
LCS 880-43278/1-A	Lab Control Sample	Total/NA	Solid	5035		
LCSD 880-43278/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
890-3754-A-1-D MS	Matrix Spike	Total/NA	Solid	5035		
890-3754-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		
Analysis Batch: 43470						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-3755-1	FS06	Total/NA	Solid	8021B	43278	
890-3755-2	FS07	Total/NA	Solid	8021B	43278	13
890-3755-3	FS08	Total/NA	Solid	8021B	43278	
890-3755-4	FS09	Total/NA	Solid	8021B	43278	
890-3755-5	FS10	Total/NA	Solid	8021B	43278	
890-3755-6	FS11	Total/NA	Solid	8021B	43278	
890-3755-7	FS12	Total/NA	Solid	8021B	43278	
890-3755-8	SW03	Total/NA	Solid	8021B	43278	
890-3755-9	SW04	Total/NA	Solid	8021B	43278	
MB 880-43278/5-A	Method Blank	Total/NA	Solid	8021B	43278	
LCS 880-43278/1-A	Lab Control Sample	Total/NA	Solid	8021B	43278	
LCSD 880-43278/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43278	
890-3754-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	43278	
890-3754-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43278	

#### Analysis Batch: 43570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3755-1	FS06	Total/NA	Solid	Total BTEX	
890-3755-2	FS07	Total/NA	Solid	Total BTEX	
890-3755-3	FS08	Total/NA	Solid	Total BTEX	
890-3755-4	FS09	Total/NA	Solid	Total BTEX	
890-3755-5	FS10	Total/NA	Solid	Total BTEX	
890-3755-6	FS11	Total/NA	Solid	Total BTEX	
890-3755-7	FS12	Total/NA	Solid	Total BTEX	
890-3755-8	SW03	Total/NA	Solid	Total BTEX	
890-3755-9	SW04	Total/NA	Solid	Total BTEX	

## GC Semi VOA

#### Analysis Batch: 43110

Lab Sample ID 890-3755-1	Client Sample ID FS06	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 43158
890-3755-2	FS07	Total/NA	Solid	8015B NM	43158
890-3755-3	FS08	Total/NA	Solid	8015B NM	43158

Eurofins Carlsbad

Client: Ensolum Project/Site: SEMU EUMONT #117

# GC Semi VOA (Continued)

#### Analysis Batch: 43110 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-3755-4	FS09	Total/NA	Solid	8015B NM	43158	
890-3755-5	FS10	Total/NA	Solid	8015B NM	43158	
890-3755-6	FS11	Total/NA	Solid	8015B NM	43158	
890-3755-7	FS12	Total/NA	Solid	8015B NM	43158	
890-3755-8	SW03	Total/NA	Solid	8015B NM	43158	
890-3755-9	SW04	Total/NA	Solid	8015B NM	43158	
MB 880-43158/1-A	Method Blank	Total/NA	Solid	8015B NM	43158	
LCS 880-43158/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43158	8
LCSD 880-43158/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43158	
880-23272-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	43158	Ç
880-23272-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43158	
Prep Batch: 43158						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-3755-1	FS06	Total/NA	Solid	8015NM Prep		
890-3755-2	FS07	Total/NA	Solid	8015NM Prep		
890-3755-3	FS08	Total/NA	Solid	8015NM Prep		
890-3755-4	FS09	Total/NA	Solid	8015NM Prep		
890-3755-5	FS10	Total/NA	Solid	8015NM Prep		
890-3755-6	FS11	Total/NA	Solid	8015NM Prep		
890-3755-7	ES12	Total/NA	Solid	8015NM Prep		

#### Prep Batch: 43158

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-3755-1	FS06	Total/NA	Solid	8015NM Prep		
890-3755-2	FS07	Total/NA	Solid	8015NM Prep		
890-3755-3	FS08	Total/NA	Solid	8015NM Prep		
890-3755-4	FS09	Total/NA	Solid	8015NM Prep		
890-3755-5	FS10	Total/NA	Solid	8015NM Prep		
890-3755-6	FS11	Total/NA	Solid	8015NM Prep		
890-3755-7	FS12	Total/NA	Solid	8015NM Prep		
890-3755-8	SW03	Total/NA	Solid	8015NM Prep		
890-3755-9	SW04	Total/NA	Solid	8015NM Prep		
MB 880-43158/1-A	Method Blank	Total/NA	Solid	8015NM Prep		
LCS 880-43158/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep		
LCSD 880-43158/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep		
880-23272-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep		
880-23272-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep		

#### Analysis Batch: 43264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3755-1	FS06	Total/NA	Solid	8015 NM	
890-3755-2	FS07	Total/NA	Solid	8015 NM	
890-3755-3	FS08	Total/NA	Solid	8015 NM	
890-3755-4	FS09	Total/NA	Solid	8015 NM	
890-3755-5	FS10	Total/NA	Solid	8015 NM	
890-3755-6	FS11	Total/NA	Solid	8015 NM	
890-3755-7	FS12	Total/NA	Solid	8015 NM	
890-3755-8	SW03	Total/NA	Solid	8015 NM	
890-3755-9	SW04	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 43226

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3755-1	FS06	Soluble	Solid	DI Leach	
890-3755-2	FS07	Soluble	Solid	DI Leach	
890-3755-3	FS08	Soluble	Solid	DI Leach	
890-3755-4	FS09	Soluble	Solid	DI Leach	
890-3755-5	FS10	Soluble	Solid	DI Leach	
890-3755-6	FS11	Soluble	Solid	DI Leach	

#### Eurofins Carlsbad

SDG: 03D2057041

Client: Ensolum Project/Site: SEMU EUMONT #117

# HPLC/IC (Continued)

## Leach Batch: 43226 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3755-7	FS12	Soluble	Solid	DI Leach	
890-3755-8	SW03	Soluble	Solid	DI Leach	
890-3755-9	SW04	Soluble	Solid	DI Leach	
MB 880-43226/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43226/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43226/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3755-1 MS	FS06	Soluble	Solid	DI Leach	
890-3755-1 MSD	FS06	Soluble	Solid	DI Leach	

#### Analysis Batch: 43376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-3755-1	FS06	Soluble	Solid	300.0	43226	
890-3755-2	FS07	Soluble	Solid	300.0	43226	
890-3755-3	FS08	Soluble	Solid	300.0	43226	
890-3755-4	FS09	Soluble	Solid	300.0	43226	
890-3755-5	FS10	Soluble	Solid	300.0	43226	
890-3755-6	FS11	Soluble	Solid	300.0	43226	
890-3755-7	FS12	Soluble	Solid	300.0	43226	
890-3755-8	SW03	Soluble	Solid	300.0	43226	
890-3755-9	SW04	Soluble	Solid	300.0	43226	
MB 880-43226/1-A	Method Blank	Soluble	Solid	300.0	43226	
LCS 880-43226/2-A	Lab Control Sample	Soluble	Solid	300.0	43226	
LCSD 880-43226/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43226	
890-3755-1 MS	FS06	Soluble	Solid	300.0	43226	
890-3755-1 MSD	FS06	Soluble	Solid	300.0	43226	

Job ID: 890-3755-1 SDG: 03D2057041

5

9

Job ID: 890-3755-1 SDG: 03D2057041

# Lab Sample ID: 890-3755-1 Matrix: Solid

Lab Sample ID: 890-3755-2

Lab Sample ID: 890-3755-3

Lab Sample ID: 890-3755-4

Date Collected: 12/30/22 09:10 Date Received: 01/03/23 09:34

**Client Sample ID: FS06** 

Client: Ensolum

	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	43278	01/05/23 14:02	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	43470	01/09/23 15:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43570	01/09/23 16:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43264	01/05/23 12:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43158	01/04/23 11:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43110	01/05/23 03:23	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	43226	01/05/23 10:27	KS	EET MID
Soluble	Analysis	300.0		1			43376	01/06/23 22:33	СН	EET MID

# **Client Sample ID: FS07**

# Date Collected: 12/30/22 09:15

Date Received: 01/03/23 09:34

	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	43278	01/05/23 14:02	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	43470	01/09/23 15:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43570	01/09/23 16:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43264	01/05/23 12:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43158	01/04/23 11:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43110	01/05/23 03:44	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43226	01/05/23 10:27	KS	EET MID
Soluble	Analysis	300.0		1			43376	01/06/23 22:51	СН	EET MID

# **Client Sample ID: FS08**

# Date Collected: 12/30/22 09:20

Date Received: 01/03/23 09:34

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	43278	01/05/23 14:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43470	01/09/23 12:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43570	01/09/23 14:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43264	01/05/23 12:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43158	01/04/23 11:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43110	01/05/23 04:06	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	43226	01/05/23 10:27	KS	EET MID
Soluble	Analysis	300.0		1			43376	01/06/23 22:57	СН	EET MID

#### **Client Sample ID: FS09** Date Collected: 12/30/22 09:25 Date Received: 01/03/23 09:34

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	43278	01/05/23 14:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43470	01/09/23 13:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43570	01/09/23 14:58	AJ	EET MID

**Eurofins Carlsbad** 

Matrix: Solid

Matrix: Solid

Matrix: Solid

Job ID: 890-3755-1 SDG: 03D2057041

## Lab Sample ID: 890-3755-4 Matrix: Solid

Lab Sample ID: 890-3755-5

Date Collected: 12/30/22 09:25 Date Received: 01/03/23 09:34

**Client Sample ID: FS09** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			43264	01/05/23 12:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	43158	01/04/23 11:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43110	01/05/23 04:27	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	43226	01/05/23 10:27	KS	EET MID
Soluble	Analysis	300.0		1			43376	01/06/23 23:04	СН	EET MID

#### Client Sample ID: FS10 Date Collected: 12/30/22 09:30

#### Date Received: 01/03/23 09:34

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	43278	01/05/23 14:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43470	01/09/23 13:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43570	01/09/23 14:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43264	01/05/23 12:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43158	01/04/23 11:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43110	01/05/23 04:48	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	43226	01/05/23 10:27	KS	EET MID
Soluble	Analysis	300.0		1			43376	01/06/23 23:10	СН	EET MID

#### **Client Sample ID: FS11**

Date Collected: 12/30/22 09:35 Date Received: 01/03/23 09:34

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 43278 01/05/23 14:02 MNR EET MID Total/NA 8021B 5 mL 5 mL 43470 01/09/23 13:44 MNR EET MID Analysis 1 Total/NA Total BTEX Analysis 1 43570 01/09/23 15:23 AJ EET MID Total/NA Analysis 8015 NM 43264 01/05/23 12:50 SM EET MID 1 Total/NA Prep 8015NM Prep 10.00 g 10 mL 43158 01/04/23 11:55 DM EET MID Total/NA Analysis 8015B NM 1 uL 1 uL 43110 01/05/23 05:09 SM EET MID 1 Soluble Leach DI Leach 4.99 g 50 mL 43226 01/05/23 10:27 KS EET MID Soluble Analysis 300.0 43376 01/06/23 23:28 СН EET MID 1

# Client Sample ID: FS12

#### Date Collected: 12/30/22 09:40 Date Received: 01/03/23 09:34

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	43278	01/05/23 14:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43470	01/09/23 14:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43570	01/09/23 15:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43264	01/05/23 12:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43158	01/04/23 11:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43110	01/05/23 05:31	SM	EET MID

Eurofins Carlsbad

Matrix: Solid

Lab Sample ID: 890-3755-6

Lab Sample ID: 890-3755-7

Matrix: Solid

Matrix: Solid

# Lab Chronicle

Job ID: 890-3755-1 SDG: 03D2057041

# Lab Sample ID: 890-3755-7

Lab Sample ID: 890-3755-8

Lab Sample ID: 890-3755-9

Matrix: Solid

Matrix: Solid

Matrix: Solid

9

Date Collected: 12/30/22 09:40 Date Received: 01/03/23 09:34

**Client Sample ID: FS12** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	43226	01/05/23 10:27	KS	EET MID
Soluble	Analysis	300.0		1			43376	01/06/23 23:34	СН	EET MID

# Client Sample ID: SW03

#### Date Collected: 12/30/22 09:45 Date Received: 01/03/23 09:34

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	43278	01/05/23 14:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43470	01/09/23 14:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43570	01/09/23 15:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43264	01/05/23 12:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43158	01/04/23 11:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43110	01/05/23 05:52	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	43226	01/05/23 10:27	KS	EET MID
Soluble	Analysis	300.0		1			43376	01/06/23 23:41	СН	EET MID

# Client Sample ID: SW04 Date Collected: 12/30/22 09:50

# Date Received: 01/03/23 09:34

	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	43278	01/05/23 14:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43470	01/09/23 17:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43570	01/10/23 13:52	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43264	01/05/23 12:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43158	01/04/23 11:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43110	01/05/23 06:13	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	43226	01/05/23 10:27	KS	EET MID
Soluble	Analysis	300.0		1			43376	01/06/23 23:47	СН	EET MID

#### Laboratory References:

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

		Accreditation/C	ertification Summary		
Client: Ensolum Project/Site: SEMU EU	MONT #117			Job ID: 890-3755-1 SDG: 03D2057041	
Laboratory: Eurofi Unless otherwise noted, all a		were covered under each acc	reditation/certification below.		
Authority		Program	Identification Number	Expiration Date	
Texas		NELAP	T104704400-22-25	06-30-23	5
the agency does not off Analysis Method		but the laboratory is not certif	ied by the governing authority. This list ma		6
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					13

Eurofins Carlsbad

Client: Ensolum

Job ID: 890-3755-1 SDG: 03D2057041

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
)I Leach	Deionized Water Leaching Procedure	ASTM	EET MID

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

Released to Imaging: 2/20/2023 2:06:44 PM

# Sample Summary

Job ID: 890-3755-1
SDG: 03D2057041

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
90-3755-1	FS06	Solid	12/30/22 09:10	01/03/23 09:34	4'
90-3755-2	FS07	Solid	12/30/22 09:15	01/03/23 09:34	4'
90-3755-3	FS08	Solid	12/30/22 09:20	01/03/23 09:34	4'
90-3755-4	FS09	Solid	12/30/22 09:25	01/03/23 09:34	4'
90-3755-5	FS10	Solid	12/30/22 09:30	01/03/23 09:34	4'
90-3755-6	FS11	Solid	12/30/22 09:35	01/03/23 09:34	4'
90-3755-7	FS12	Solid	12/30/22 09:40	01/03/23 09:34	4'
90-3755-8	SW03	Solid	12/30/22 09:45	01/03/23 09:34	0-4'
90-3755-9	SW04	Solid	12/30/22 09:50	01/03/23 09:34	0-4'

	Xenco	Xenco	Midiano, EL Paso Hobbs, I	Midland, TX (432) /04-5440, San Antonio, TX (210) 009-339 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	т (210) эрэ-ззэ <del>н</del> 7X (806) 794-1296 M (575) 988-3199		-
						www.xenco.com	Page 1 of 1
Project Manager. Ha	Hadlie Green		Bill to: (if different)	Kalei Jennings		Work Order Comments	Comments
	Ensolum, LLC		Company Name:	Ensolum, LLC	Pro	Program: UST/PST PRP Brownfields	fields CRC Duperfund
	3122 Nat'l Parks Highway	ay	Address:	3122 Nat'l Parks Highway		State of Project: NM	}
te ZIP:	Carlsbad, NM 88220		City, State ZIP:	Carlsbad, NM 88220		Reporting: Level II Level III PST/UST	
	432-557-8895	Email	Email: hgreen@ensolum.com.	n.com, kjennings@ensolum.com		Deliverables: EDD ADaPT	Other:
Project Name:	Stmil Aumort	#117 / Tur	Turn Around		ANALYSIS REQUEST	ŝТ	Preservative Codes
Project Number:	607057041	IV Rout	_	Pres.			None: NO DI Water: H <sub>2</sub> O
Project Location:	2.559577	103,7 (Notaug Date:					Cool: Cool MeOH: Me
Sampler's Name:	Julianna Falcomata	L.	AT starts the day received by		_		
PO#							H2SO4: H2 NaOH: Na
SAMPLE RECEIPT	Temp Blank:	Tes No Wet Ice:	NO SEL	nete			H <sub>3</sub> PO <sub>4</sub> : HP
Samples Received Intact:	ot: (es No	Thermometer ID:	Three and	aran			NaHSO4: NABIS
Cooler Custody Seals:	Yes No WA	Correction Factor:	9	P.	800-3755 Chain of Custody		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , NaSO <sub>3</sub>
Sample Custody Seals:	Yes NO MA	Temperature Reading:	X	s	000-0100		Zn Acetate+NaOH: Zn
Total Containers:			Grab/ #	-			
Sample Identification	ication Matrix	Sampled Sampled		BTE TPH CHL			sample Comments
FS06	5	12-30-22 13910	4 0				
1311	S	17-30-77 1915	0				MHPT (23)44665
FSVG	CS	12-30-22 (1970	C IN				
FS09	6	12-30-22 (1925	C C				
F510	03	2-30-22 (1930	4.0				
R	cs.	12-50-22 09-35	4				
FS 12	O.	12-30-22 (19410	4.01				
SWOS		12-30-22 1445	0410				
SWUT	C	001.0 2205-21					
Total 200.7 / 6010	0 200.8 / 6020:	8RCRA 1	13PPM Texas 11	Al Sb As Ba Be B Cd	d Ca Cr Co Cu Fe Pb Mg	Mn Mo Ni K Se Ag SiO2	Na Sr TI Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed	Metal(s) to be analyz		l ö	Sb As Ba Be Cd	Co Cu Pb Mn Mo Ni	С	Hg: 1631 / 245.1 / 7470 / 7471
Notice: Signature of this dou of service. Eurofins Xenco v of Eurofins Xenco. A minim	cument and relinquishment ( will be liable only for the cos um charge of \$85.00 will be ;	of samples constitutes a valid t of samples and shall not as: applied to each project and a	purchase order from cli sume any responsibility : charge of \$5 for each sa	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. 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 ar or Eurofins Xenco. A minimum charge of \$55.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms or Eurofins Xenco.	s affiliates and subcontractors. It ass ed by the client if such losses are due , but not analyzed. These terms will b	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 service. Eurofins Xenco. A minimum charce of \$85.00 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.	
(Relinduished by: (	(Signature)	Received by: (Signature)	ature)	Date/Time F	Relinquished by: (Signature)	Received by: (Signature)	e) Date/Time
	pignature,	1 /1		12/22			
LANDARY .	S R	MAR NO	1.1	1 5/25 9'00 A			
A II A		vora?	life 1	210 ECE			

1/10/2023

Page 157 of 244

13

# Chain of Custody

# Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 3755 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	

Job Number: 890-3755-1 SDG Number: 03D2057041

14

Job Number: 890-3755-1 SDG Number: 03D2057041

List Source: Eurofins Midland

List Creation: 01/04/23 11:29 AM

# Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3755 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	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 2/2/2023 9:39:03 AM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Hadlie Green Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 1/13/2023 12:38:09 PM

# JOB DESCRIPTION

SEMU Eumont #117 SDG NUMBER Lea County NM

# **JOB NUMBER**

890-3816-1

RT OR reen blum d St. 400 9701

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

Received by OCD: 2/2/2023 9:39:03 AM

# **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

RAMER

Generated 1/13/2023 12:38:09 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

Laboratory Job ID: 890-3816-1 SDG: Lea County NM

# **Table of Contents**

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	10
QC Sample Results	11
QC Association Summary	15
Lab Chronicle	17
Certification Summary	19
Method Summary	20
Sample Summary	21
Chain of Custody	22
Receipt Checklists	23

Page 162 of 244

	Definitions/Glossary		
Olivet Freedow	-		
Client: Ensolun Project/Site: SI	m EMU Eumont #117	Job ID: 890-3816-1 SDG: Lea County NM	
Qualifiers			R
GC VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
F2	MS/MSD RPD exceeds control limits		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier	Qualifier Description		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
U	Indicates the analyte was analyzed for but not detected.		
Glossary	· · · · · · · · · · · · · · · · · · ·		
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		
DLC	Decision Level Concentration (Radiochemistry)		
EDL	Estimated Detection Limit (Dioxin)		
LOD	Limit of Detection (DoD/DOE)		
LOQ	Limit of Quantitation (DoD/DOE)		
LOQ MCL	EPA recommended "Maximum Contaminant Level"		
LOQ			

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 Practical Quantitation Limit PQL

PRES Presumptive QC Quality Control RER Relative Error Ratio (Radiochemistry) Reporting Limit or Requested Limit (Radiochemistry) RL

- RPD Relative Percent Difference, a measure of the relative difference between two points
- TEF Toxicity Equivalent Factor (Dioxin)
- Toxicity Equivalent Quotient (Dioxin) TEQ
- TNTC Too Numerous To Count

Job ID: 890-3816-1 SDG: Lea County NM

#### Job ID: 890-3816-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

Project/Site: SEMU Eumont #117

#### Narrative

Job Narrative 890-3816-1

#### Receipt

The samples were received on 1/10/2023 1:11 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 1.6°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-3816-1), FS02 (890-3816-2), FS03 (890-3816-3) and FS04 (890-3816-4).

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-43731 and analytical batch 880-43697 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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 880-43699 and analytical batch 880-43692 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

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-43764 and analytical batch 880-43870 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.

Job ID: 890-3816-1 SDG: Lea County NM

# Client Sample ID: FS01

Project/Site: SEMU Eumont #117

Date Collected: 01/10/23 10:45 Date Received: 01/10/23 13:11

Sample Depth: 4.5

Client: Ensolum

SDG: Lea County N

# Lab Sample ID: 890-3816-1

Matrix: Solid

Analyte	Organic Comp Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/11/23 10:48	01/12/23 01:54	1
oluene	<0.00200	U	0.00200	mg/Kg		01/11/23 10:48	01/12/23 01:54	1
thylbenzene	<0.00200	U	0.00200	mg/Kg		01/11/23 10:48	01/12/23 01:54	1
n-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/11/23 10:48	01/12/23 01:54	1
-Xylene	<0.00200	U	0.00200	mg/Kg		01/11/23 10:48	01/12/23 01:54	1
(ylenes, Total	<0.00399	U	0.00399	mg/Kg		01/11/23 10:48	01/12/23 01:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
-Bromofluorobenzene (Surr)	97		70 - 130			01/11/23 10:48	01/12/23 01:54	1
,4-Difluorobenzene (Surr)	88		70 - 130			01/11/23 10:48	01/12/23 01:54	1
lethod: TAL SOP Total BTEX - T	otal BTEX Calo	ulation						
nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
otal BTEX	<0.00399	U	0.00399	mg/Kg			01/12/23 13:07	1
Method: SW846 8015 NM - Diese		Qualifier	BC) RL	Unit	D	Bronorod	Applyrod	Dil Fac
Analyte Total TPH			49.9	mg/Kg		Prepared	Analyzed 01/12/23 14:41	
GRO)-C6-C10								
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		01/11/23 08:24	Analyzed 01/11/23 18:07	1
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		01/11/23 08:24	01/11/23 18:07	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/11/23 08:24	01/11/23 18:07	1
Sin Range Organics (Over 020-030)								
	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Surrogate		Qualifier	Limits 70 - 130			<b>Prepared</b> 01/11/23 08:24	Analyzed 01/11/23 18:07	Dil Fac
Surrogate 1-Chlorooctane	%Recovery	Qualifier				· · · · · · · · · · · · · · · · · · ·		
Surrogate I-Chlorooctane D-Terphenyl	% <b>Recovery</b> 89 86		70 - 130 70 - 130			01/11/23 08:24	01/11/23 18:07	1
Surrogate 1-Chlorooctane 5-Terphenyl Method: MCAWW 300.0 - Anions	%Recovery 89 86 5, Ion Chromato		70 - 130 70 - 130	Unit	D	01/11/23 08:24	01/11/23 18:07	1
Surrogate 1-Chlorooctane o-Terphenyl Method: MCAWW 300.0 - Anions Analyte	%Recovery 89 86 5, Ion Chromato	ography - So	70 - 130 70 - 130 Dluble	Unit mg/Kg	<u>D</u>	01/11/23 08:24 01/11/23 08:24	01/11/23 18:07 01/11/23 18:07	1 1
Surrogate 1-Chlorooctane o-Terphenyl Method: MCAWW 300.0 - Anions Analyte Chloride	%Recovery 89 86 5, Ion Chromato Result	ography - So	70 - 130 70 - 130 Dluble RL		D_	01/11/23 08:24 01/11/23 08:24 Prepared	01/11/23 18:07 01/11/23 18:07 01/11/23 18:07 Analyzed 01/13/23 03:34	1 1 1
Surrogate 1-Chlorooctane o-Terphenyl Method: MCAWW 300.0 - Anions Analyte Chloride lient Sample ID: FS02	%Recovery 89 86 5, Ion Chromato Result	ography - So	70 - 130 70 - 130 Dluble RL		<u>D</u>	01/11/23 08:24 01/11/23 08:24 Prepared	01/11/23 18:07 01/11/23 18:07 Analyzed 01/13/23 03:34 nple ID: 890-	1 1 Dil Fac 1 3816-2
Surrogate I-Chlorooctane D-Terphenyl Method: MCAWW 300.0 - Anions Analyte Chloride lient Sample ID: FS02 ate Collected: 01/10/23 10:50	%Recovery 89 86 5, Ion Chromato Result	ography - So	70 - 130 70 - 130 Dluble RL		D	01/11/23 08:24 01/11/23 08:24 Prepared	01/11/23 18:07 01/11/23 18:07 Analyzed 01/13/23 03:34 nple ID: 890-	1 1 
Surrogate 1-Chlorooctane 0-Terphenyl Method: MCAWW 300.0 - Anions Analyte Chloride lient Sample ID: FS02 ate Collected: 01/10/23 10:50 ate Received: 01/10/23 13:11	%Recovery 89 86 5, Ion Chromato Result	ography - So	70 - 130 70 - 130 Dluble RL		<u>D</u>	01/11/23 08:24 01/11/23 08:24 Prepared	01/11/23 18:07 01/11/23 18:07 Analyzed 01/13/23 03:34 nple ID: 890-	1 1 Dil Fac 1 3816-2
Surrogate 1-Chlorooctane b-Terphenyl Method: MCAWW 300.0 - Anions Analyte Chloride lient Sample ID: FS02 ate Collected: 01/10/23 10:50 ate Received: 01/10/23 13:11 ample Depth: 4.5	%Recovery 89 86 5, Ion Chromato Result 38.8	o <mark>graphy - So</mark> Qualifier	70 - 130 70 - 130 Dluble <u>RL</u> 4.99		D	01/11/23 08:24 01/11/23 08:24 Prepared	01/11/23 18:07 01/11/23 18:07 Analyzed 01/13/23 03:34 nple ID: 890-	1 1 Dil Fac 1 3816-2
Surrogate I-Chlorooctane D-Terphenyl Method: MCAWW 300.0 - Anions Analyte Chloride lient Sample ID: FS02 ate Collected: 01/10/23 10:50 ate Received: 01/10/23 13:11 ample Depth: 4.5 Method: SW846 8021B - Volatile	%Recovery 89 86 5, Ion Chromato Result 38.8 Organic Comp	o <mark>graphy - So</mark> Qualifier	70 - 130 70 - 130 Dluble <u>RL</u> 4.99		D	01/11/23 08:24 01/11/23 08:24 Prepared	01/11/23 18:07 01/11/23 18:07 Analyzed 01/13/23 03:34 nple ID: 890-	1 1 Dil Fac 1 3816-2
Surrogate 1-Chlorooctane o-Terphenyl Method: MCAWW 300.0 - Anions Analyte Chloride lient Sample ID: FS02 ate Collected: 01/10/23 10:50 ate Received: 01/10/23 13:11 ample Depth: 4.5 Method: SW846 8021B - Volatile Analyte	%Recovery 89 86 5, Ion Chromato Result 38.8 Organic Comp	ography - So Qualifier Ounds (GC) Qualifier	70 - 130 70 - 130 Dluble <u>RL</u> 4.99	mg/Kg		01/11/23 08:24 01/11/23 08:24 Prepared	01/11/23 18:07 01/11/23 18:07 Analyzed 01/13/23 03:34 nple ID: 890- Matri	1 1 2011 Fac 1 3816-2 x: Solid
Surrogate 1-Chlorooctane o-Terphenyl Method: MCAWW 300.0 - Anions Analyte Chloride lient Sample ID: FS02 ate Collected: 01/10/23 10:50 ate Received: 01/10/23 13:11 ample Depth: 4.5 Method: SW846 8021B - Volatile Analyte Benzene Toluene	%Recovery 89 86 5, Ion Chromato Result 38.8 Organic Comp Result	ography - So Qualifier ounds (GC) Qualifier U	70 - 130 70 - 130 Dluble 	mg/Kg		01/11/23 08:24 01/11/23 08:24 Prepared Lab San	01/11/23 18:07 01/11/23 18:07 Analyzed 01/13/23 03:34 nple ID: 890- Matri Analyzed	Dil Fac

4-Bromofluorobenzene (Surr)	86		70 - 130		01/11/23 10:48	01/12/23 03:57	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00401	U	0.00401	mg/Kg	01/11/23 10:48	01/12/23 03:57	1
o-Xylene	<0.00200	U	0.00200	mg/Kg	01/11/23 10:48	01/12/23 03:57	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg	01/11/23 10:48	01/12/23 03:57	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg	01/11/23 10:48	01/12/23 03:57	1
Toluene	<0.00200	U	0.00200	mg/Kg	01/11/23 10:48	01/12/23 03:57	1

Eurofins Carlsbad

Matrix: Solid

5

# **Client Sample Results**

Job ID: 890-3816-1 SDG: Lea County NM

Lab Sample ID: 890-3816-2

# Client Sample ID: FS02

Project/Site: SEMU Eumont #117

Date Collected: 01/10/23 10:50 Date Received: 01/10/23 13:11

Sample Depth: 4.5

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	79		70 - 130			01/11/23 10:48	01/12/23 03:57	1
Method: TAL SOP Total BTEX - T	otal BTEX Calo	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/12/23 13:07	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/12/23 14:41	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/11/23 08:24	01/11/23 18:29	1
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		01/11/23 08:24	01/11/23 18:29	
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/11/23 08:24	01/11/23 18:29	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130			01/11/23 08:24	01/11/23 18:29	1
o-Terphenyl	83		70 - 130			01/11/23 08:24	01/11/23 18:29	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	graphy - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	46.3	F1	5.04	mg/Kg			01/13/23 03:38	1

Date Collected: 01/10/23 10:55 Date Received: 01/10/23 13:11

Sample Depth: 4.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199	mg/Kg		01/11/23 10:48	01/12/23 04:17	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/11/23 10:48	01/12/23 04:17	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/11/23 10:48	01/12/23 04:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/11/23 10:48	01/12/23 04:17	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/11/23 10:48	01/12/23 04:17	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/11/23 10:48	01/12/23 04:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			01/11/23 10:48	01/12/23 04:17	1
1,4-Difluorobenzene (Surr)	88		70 - 130			01/11/23 10:48	01/12/23 04:17	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/12/23 13:07	1
- Method: SW846 8015 NM - Die	sel Range Organ	ics (DRO) (	GC)					
		0	RL	Unit	D	Droporod	Analyzed	Dil Fac
Analyte	Result	Qualifier	RL	Unit		Prepared	Analyzed	DIFAC

Eurofins Carlsbad

Released to Imaging: 2/20/2023 2:06:44 PM

## **Client Sample Results**

Job ID: 890-3816-1 SDG: Lea County NM

Lab Sample ID: 890-3816-4

Matrix: Solid

# **Client Sample ID: FS03**

Project/Site: SEMU Eumont #117

Date Collected: 01/10/23 10:55 Date Received: 01/10/23 13:11

Sample Depth: 4.5

Client: Ensolum

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/11/23 08:24	01/11/23 18:52	1
Diesel Range Organics (Over C10-C28)	62.1		50.0	mg/Kg		01/11/23 08:24	01/11/23 18:52	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/11/23 08:24	01/11/23 18:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			01/11/23 08:24	01/11/23 18:52	1
o-Terphenyl	94		70 - 130			01/11/23 08:24	01/11/23 18:52	1

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

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59.1	5.05	mg/Kg			01/13/23 03:53	1

#### **Client Sample ID: FS04**

#### Date Collected: 01/10/23 11:00 Date Received: 01/10/23 13:11

Sample Depth: 4.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/11/23 10:48	01/12/23 04:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/11/23 10:48	01/12/23 04:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/11/23 10:48	01/12/23 04:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/11/23 10:48	01/12/23 04:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/11/23 10:48	01/12/23 04:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/11/23 10:48	01/12/23 04:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130			01/11/23 10:48	01/12/23 04:37	1
1,4-Difluorobenzene (Surr)	90		70 - 130			01/11/23 10:48	01/12/23 04:37	1
Method: TAL SOP Total BTEX - T Analyte Total BTEX		Qualifier	<b>RL</b> 0.00398	Unit mg/Kg	D	Prepared	Analyzed 01/12/23 13:07	Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Diese	Result <0.00398	Qualifier	0.00398	mg/Kg			01/12/23 13:07	Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Diese Analyte	Result <0.00398 I Range Organ Result	Qualifier U ics (DRO) ( Qualifier	0.00398 GC) RL	mg/Kg Unit	<u>D</u>	Prepared Prepared	01/12/23 13:07 Analyzed	1
Analyte Total BTEX Method: SW846 8015 NM - Diese Analyte Total TPH	Result <0.00398 Range Organ Result <49.9	Qualifier U ics (DRO) ( Qualifier U	0.00398 GC) RL 49.9	mg/Kg			01/12/23 13:07	Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese	Result <0.00398 Range Organ Result <49.9 sel Range Orga	Qualifier U ics (DRO) ( Qualifier U	0.00398 GC) RL 49.9	mg/Kg Unit			01/12/23 13:07 Analyzed	1
Analyte Total BTEX Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	Result <0.00398 Range Organ Result <49.9 sel Range Orga	Qualifier U ics (DRO) ( Qualifier U nics (DRO) Qualifier	0.00398 GC) <u>RL</u> 49.9 (GC)	mg/Kg Unit mg/Kg	<u>D</u>	Prepared	01/12/23 13:07 Analyzed 01/12/23 14:41	1 Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Diese Analyte	Result <0.00398 Range Organ Result <49.9 sel Range Orga Result	Qualifier U ics (DRO) (1 Qualifier U nics (DRO) Qualifier U	0.00398 GC) RL 49.9 (GC) RL	mg/Kg Unit mg/Kg Unit	<u>D</u>	Prepared	01/12/23 13:07 Analyzed 01/12/23 14:41 Analyzed	1 Dil Fac

		Client	Sample Res	sults					
Client: Ensolum Project/Site: SEMU Eumont #117							Job ID: 890 SDG: Lea Co		2
Client Sample ID: FS04 Date Collected: 01/10/23 11:00						Lab Sa	mple ID: 890- Matri	-3816-4 ix: Solid	
Date Received: 01/10/23 13:11 Sample Depth: 4.5									4
Method: MCAWW 300.0 - Anions,			<mark>Jble</mark> RL	Unit	<b>D</b>	Bronorod	Applyzed	Dil Fac	5
Analyte Chloride	42.6	Qualifier	5.00	mg/Kg	<u>D</u>	Prepared	Analyzed 01/13/23 03:57	1	
									7 8 9 10
									13

...

. .

Eurofins Carlsbad

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

Percent Surrogate Recovery (Acceptance Limits) DFBZ1 BFB1 Lab Sample ID Client Sample ID (70-130) (70-130) 890-3815-A-3-D MS Matrix Spike 94 101 890-3815-A-3-E MSD Matrix Spike Duplicate 98 83 890-3816-1 FS01 97 88 890-3816-2 FS02 79 86 890-3816-3 FS03 102 88 FS04 890-3816-4 97 90 LCS 880-43731/1-A Lab Control Sample 89 100 LCSD 880-43731/2-A Lab Control Sample Dup 90 103 MB 880-43675/5-A Method Blank 86 94 MB 880-43731/5-A Method Blank 81 87 Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

_				Percent Surroga
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3772-A-1-F MS	Matrix Spike	104	96	
890-3772-A-1-G MSD	Matrix Spike Duplicate	107	98	
890-3816-1	FS01	89	86	
890-3816-2	FS02	87	83	
890-3816-3	FS03	105	94	
890-3816-4	FS04	94	83	
LCS 880-43699/2-A	Lab Control Sample	105	100	
LCSD 880-43699/3-A	Lab Control Sample Dup	120	109	
MB 880-43699/1-A	Method Blank	164 S1+	153 S1+	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Page 169 of 244

#### Job ID: 890-3816-1 SDG: Lea County NM

Prep Type: Total/NA

Prep Type: Total/NA

# **QC Sample Results**

Client: Ensolum Project/Site: SEMU Eumont #117

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

Lab Sample ID: MB 880-4367	5/5-A								Client Sa	mple ID: Metho	
Matrix: Solid										Prep Type:	
Analysis Batch: 43697										Prep Batc	h: 43675
		MB									
Analyte		Qualifier	RL		Unit		<u>D</u>		repared	Analyzed	Dil Fac
Benzene	<0.00200		0.00200		mg/K	-			0/23 15:19	01/11/23 11:10	1
Toluene	<0.00200		0.00200		mg/K	-			0/23 15:19	01/11/23 11:10	1
Ethylbenzene	<0.00200		0.00200		mg/K				0/23 15:19	01/11/23 11:10	1
m-Xylene & p-Xylene	<0.00400		0.00400		mg/K	-			0/23 15:19	01/11/23 11:10	1
o-Xylene	<0.00200	U	0.00200		mg/K	g		01/1	0/23 15:19	01/11/23 11:10	1
Xylenes, Total	<0.00400	U	0.00400		mg/K	g		01/1	0/23 15:19	01/11/23 11:10	1
	MB	MB									
Surrogate	%Recovery		Limits					Р	repared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130						0/23 15:19	01/11/23 11:10	1
1,4-Difluorobenzene (Surr)	94		70 - 130					01/1	0/23 15:19	01/11/23 11:10	1
Lab Sample ID: MB 880-4373	1/5-A								<b>Client Sa</b>	mple ID: Metho	od Blank
Matrix: Solid										Prep Type:	Total/NA
Analysis Batch: 43697										Prep Batc	h: 43731
	МВ	MB									
Analyte	Result	Qualifier	RL		Unit		D	Р	repared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/K	g	_	01/1	1/23 10:48	01/11/23 23:09	1
Toluene	<0.00200	U	0.00200		mg/K	g		01/1	1/23 10:48	01/11/23 23:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/K	g		01/1	1/23 10:48	01/11/23 23:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/K	g		01/11/23 10:48		01/11/23 23:09	1
o-Xylene	<0.00200	U	0.00200		mg/K	g		01/1	1/23 10:48	01/11/23 23:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/K	g		01/1	1/23 10:48	01/11/23 23:09	1
0	MB		1							A	D# 5
Surrogate	%Recovery	·	<i>Limits</i>						repared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130 70 - 130						1/23 10:48	01/11/23 23:09	-
1,4-Difluorobenzene (Surr)	87		70 - 130					01/1	1/23 10:48	01/11/23 23:09	1
Lab Sample ID: LCS 880-4373	31/1 <b>-A</b>						С	lient	Sample	ID: Lab Control	Sample
Matrix: Solid							Ŭ		Campio	Prep Type:	
Analysis Batch: 43697										Prep Batc	
			Spike	LCS	LCS					%Rec	
Analyte			Added		Qualifier	Unit		D	%Rec	Limits	
Benzene			0.100	0.09649		mg/Kg			96	70 - 130	
Toluene			0.100	0.09278		mg/Kg			93	70 - 130	
Ethylbenzene			0.100	0.07810		mg/Kg			78	70 - 130	
m-Xylene & p-Xylene			0.200	0.1623		mg/Kg			81	70 - 130	
o-Xylene			0.100	0.08971		mg/Kg			90	70 - 130	
			0.100	0.00071		mg/ng			50	10-100	
	LCS LCS	S									
Surrogate	%Recovery Qua	alifier	Limits								
4-Bromofluorobenzene (Surr)	89		70 - 130								
1,4-Difluorobenzene (Surr)	100		70 - 130								
								~			
Lab Sample ID: LCSD 880-43	131/2 <b>-</b> A					Cli	ent	Sam	ipie ID: L	ab Control Sam	
Matrix: Solid										Prep Type:	
Analysis Batch: 43697			• "							Prep Batc	
			Spike		LCSD			_	~-	%Rec	RPD
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits RP	D Limit

5 7

Eurofins Carlsbad

70 - 130

96

# **Released to Imaging: 2/20/2023 2:06:44 PM**

Benzene

0.09588

mg/Kg

0.100

1

35

# **QC Sample Results**

Client: Ensolum Project/Site: SEMU Eumont #117 Job ID: 890-3816-1 SDG: Lea County NM

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

Lab Sample ID: LCSD 880-4	3731/2-A					Clier	nt Sam	ple ID:	Lab Contro	l Sampl	e Dup
Matrix: Solid									Prep 1	Type: To	tal/N/
Analysis Batch: 43697									Prep	Batch:	43731
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Toluene			0.100	0.09162		mg/Kg		92	70 - 130	1	3
Ethylbenzene			0.100	0.07745		mg/Kg		77	70 - 130	1	3
m-Xylene & p-Xylene			0.200	0.1600		mg/Kg		80	70 - 130	1	3
o-Xylene			0.100	0.08864		mg/Kg		89	70 - 130	1	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)			70 - 130								
1,4-Difluorobenzene (Surr)	103		70 - 130								
Lab Sample ID: 890-3815-A	-3-D MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid								onone		Type: To	
Analysis Batch: 43697										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec	Batom	
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00199	U F1 F2	0.0996	0.08390		mg/Kg		84	70 - 130		
Toluene	<0.00199	U F1	0.0996	0.07789		mg/Kg		78	70 - 130		
Ethylbenzene	<0.00199	U	0.0996	0.06955		mg/Kg		70	70 - 130		
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.1409		mg/Kg		71	70 - 130		
o-Xylene	<0.00199	U	0.0996	0.08293		mg/Kg		83	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	94		70 - 130								
1,4-Difluorobenzene (Surr)	101		70 - 130								
Lab Sample ID: 890-3815-A	-3-E MSD					Cli	ient Sa	ample IC	): Matrix Sp	oike Dup	olicate
Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 43697										Batch:	
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U F1 F2	0.101	0.05430	F1 F2	mg/Kg		54	70 - 130	43	35
Toluene	<0.00199	U F1	0.101	0.06989	F1	mg/Kg		69	70 - 130	11	35
Ethylbenzene	<0.00199	U	0.101	0.07491		mg/Kg		74	70 - 130	7	35
m-Xylene & p-Xylene	<0.00398	U F1	0.202	0.1311	F1	mg/Kg		65	70 - 130	7	35

o-Xylene	<0.00199	U	0.101
	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	83		70 - 130

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

Lab Sample ID: MB 880-43699/1-A Matrix: Solid Analysis Batch: 43692	MB	мв				Client Sa	mple ID: Metho Prep Type: <sup>-</sup> Prep Batcl	Total/NA
Analyte		Qualifier	RL	Unit	D	Prepared	Analvzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0		50.0	mg/Kg		01/11/23 08:04	01/11/23 08:18	1

0.07783

mg/Kg

77

70 - 130

35

6

#### Job ID: 890-3816-1 SDG: Lea County NM

Lab Sample ID: MB 880-43699/	/ <b>1-A</b>								<b>Client Sa</b>	ample ID: Met	hod	Blank
Matrix: Solid										Prep Type		
Analysis Batch: 43692										Prep Ba		
,		МВ МВ										
Analyte	Re	sult Qualifie	r RL		Unit		D	P	repared	Analyzed		Dil Fa
Diesel Range Organics (Over		50.0 U	50.0		mg/K	q			1/23 08:04	01/11/23 08:1	3	
C10-C28)					0	0						
Oll Range Organics (Over C28-C36)	<	50.0 U	50.0		mg/K	g		01/1	1/23 08:04	01/11/23 08:1	3	
		MB MB										
Surrogate	%Reco	very Qualifie	er Limits					P	repared	Analyzed		Dil Fa
1-Chlorooctane		164 S1+	70 - 130				-		1/23 08:04	01/11/23 08:1	8 -	-
o-Terphenyl		153 S1+	70 - 130					01/1	1/23 08:04	01/11/23 08:1	8	
Lab Sample ID: LCS 880-43699	9/2-A						Cli	ient	Sample	ID: Lab Conti		
Matrix: Solid										Prep Type		
Analysis Batch: 43692			e		1.00					Prep Ba	tch:	4369
			Spike		LCS			_	~ <b>-</b>	%Rec		
Analyte			Added		Qualifier	Unit		<u>D</u>	<u>%Rec</u>	Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	923.6		mg/Kg			92	70 - 130		
Diesel Range Organics (Over			1000	908.1		mg/Kg			91	70 - 130		
C10-C28)												
	LCS	109										
Surrogate	%Recovery		Limits									
1-Chlorooctane	105	Quanner	70 - 130									
o-Terphenyl	100		70 - 130									
-												
Lab Sample ID: LCSD 880-436	99/3-A					Cli	ent S	Sam	ple ID: L	ab Control Sa	mpl	le Dup
Matrix: Solid										Prep Type	: To	tal/NA
Analysis Batch: 43692										Prep Ba	tch:	43699
			Spike	LCSD	LCSD					%Rec		RPD
Analyte			Added	Result	Qualifier	Unit		D	%Rec		RPD	Limi
Gasoline Range Organics			1000	988.6		mg/Kg			99	70 - 130	7	20
(GRO)-C6-C10			1000	999.2		malka			100	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	999.2		mg/Kg			100	70 - 130	10	20
010 020)												
	LCSD											
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	120		70 - 130									
o-Terphenyl	109		70 - 130									
Lab Sample ID: 890-3772-A-1-F	= MS								Client S	Sample ID: Ma	atrix	Spike
Matrix: Solid	-									Prep Type		
Analysis Batch: 43692										Prep Ba		
-	Sample	Sample	Spike	MS	MS					• %Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics	<49.9	U	998	1094		mg/Kg		_	110	70 - 130		
(GRO)-C6-C10												
Diesel Range Organics (Over	<49.9	U	998	1047		mg/Kg			105	70 - 130		
C10-C28)												
	140	MC										
	MS	11/13										

	100	1013	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	96		70 - 130

Eurofins Carlsbad

# **QC Sample Results**

Client: Ensolum Project/Site: SEMU Eumont #117 Job ID: 890-3816-1 SDG: Lea County NM

Page 173 of 244

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

Matrix: Solid	1-G MSD									): Matrix S	Туре: То	
Analysis Batch: 43692											Batch:	
Analysis Daten. 45052	Sample	Sample	Spike	MSD	MSD					%Rec	Daten.	RPE
Analyte	-	Qualifier	Added		Qualifier	Unit		D	%Rec	Limits	RPD	Limi
Gasoline Range Organics	<49.9		997	1002		mg/Kg			101	70 - 130	9	2
(GRO)-C6-C10		0	551	1002		iiig/itg			101	10-100	0	2
Diesel Range Organics (Over	<49.9	U	997	1085		mg/Kg			109	70 - 130	4	2
C10-C28)												
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane			70 - 130									
o-Terphenyl	98		70 - 130 70 - 130									
lethod: 300.0 - Anions, I		ography										
		ograpny										
Lab Sample ID: MB 880-4376	64/1-A								Client S	ample ID:		
Matrix: Solid										Prep	Type: So	olubl
Analysis Batch: 43870												
		MB MB										
Analyte	R	esult Qualifier			Unit		D	Pr	epared	Analyz		Dil Fa
Chloride	<	5.00 U		5.00	mg/K	g				01/13/23	02:17	
							0.11		<b>.</b>			
Lab Campila ID, LOO 000, 407												
	764/2-A						Cili	ent	Sample	ID: Lab C		
Matrix: Solid	764/2-A						CIII	ent	Sample		Type: So	
Matrix: Solid	764/2-A		0.11	1.00			Cin	ent	Sample	Prep		
Matrix: Solid Analysis Batch: 43870	764/2-A		Spike		LCS				-	Prep %Rec		
Matrix: Solid Analysis Batch: 43870 <sup>Analyte</sup>			Added	Result	LCS Qualifier	Unit		D .	%Rec	Prep %Rec Limits		
Matrix: Solid Analysis Batch: 43870 <sup>Analyte</sup>						Unit mg/Kg			-	Prep %Rec		
Matrix: Solid Analysis Batch: 43870 Analyte Chloride			Added	Result		mg/Kg		<u>D</u> .	<b>%Rec</b> 99	Prep %Rec Limits 90 - 110	Type: So	olubl
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43			Added	Result		mg/Kg		<u>D</u> .	<b>%Rec</b> 99	Prep %Rec Limits 90 - 110	Type: So	olubi
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid			Added	Result		mg/Kg		<u>D</u> .	<b>%Rec</b> 99	Prep %Rec Limits 90 - 110	Type: So	olubi
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid			Added 250	Result 247.9	Qualifier	mg/Kg		<u>D</u> .	<b>%Rec</b> 99	Prep %Rec Limits 90 - 110 Lab Contro Prep	Type: So	e Du olubi
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870			Added 250 Spike	Result 247.9 LCSD	Qualifier	mg/Kg	ent S	D am	%Rec 99	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec	Type: So 	e Du olubi olubi RP
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 43870 Analyte			Added 250 Spike Added	Result 247.9 LCSD Result	Qualifier	mg/Kg Cli	ent S	<u>D</u> .	%Rec 99 ple ID: I	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits	Type: So ol Sampl Type: So 	e Duj olubi olubi RPI Lim
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 43870 Analyte			Added 250 Spike	Result 247.9 LCSD	Qualifier	mg/Kg	ent S	D am	%Rec 99	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec	Type: So 	e Du olubi olubi RP
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride	3764/3-A		Added 250 Spike Added	Result 247.9 LCSD Result	Qualifier	mg/Kg Cli	ent S	D am	%Rec 99 ple ID: I	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110	Type: So ol Sampl Type: So <u>RPD</u> 10	e Du olubi olubi RP Lim 2
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: 890-3816-2 M	3764/3-A		Added 250 Spike Added	Result 247.9 LCSD Result	Qualifier	mg/Kg Cli	ent S	D am	%Rec 99 ple ID: I	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa	Type: So ol Sampl Type: So <u></u>	e Du olubi RPI Lim 2 : FS0
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid	3764/3-A		Added 250 Spike Added	Result 247.9 LCSD Result	Qualifier	mg/Kg Cli	ent S	D am	%Rec 99 ple ID: I	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa	Type: So ol Sampl Type: So <u>RPD</u> 10	e Duj olubli Olubli Lim 2 : FS0:
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid	 3764/3-A 		Added 250 Spike Added 250	Result 247.9 LCSD Result 273.2	Qualifier LCSD Qualifier	mg/Kg Cli	ent S	D am	%Rec 99 ple ID: I	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa Prep	Type: So ol Sampl Type: So <u></u>	e Duj olubli Olubli Lim 2 : FS0:
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid Analysis Batch: 43870	3764/3-A MS Sample	Sample	Added 250 Spike Added 250 Spike	Result 247.9 LCSD Result 273.2 MS	Qualifier LCSD Qualifier MS	Unit mg/Kg	ent S	D am	%Rec 99 ple ID: I %Rec 109	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa Prep %Rec	Type: So ol Sampl Type: So <u></u>	e Duj olubli Olubli Lim 2 : FS0:
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid Analysis Batch: 43870 Analyte	3764/3-A MS Sample Result	Qualifier	Added 250 Spike Added 250 Spike Added	Result 247.9 LCSD Result 273.2 MS Result	Qualifier LCSD Qualifier MS Qualifier	Unit Unit Unit	ent S	D am	%Rec 99 ple ID: I 109 %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa Prep %Rec Limits	Type: So ol Sampl Type: So <u></u>	e Dup oluble RPI Limi 20 : FS02
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid Analysis Batch: 43870 Analyte	3764/3-A MS Sample	Qualifier	Added 250 Spike Added 250 Spike	Result 247.9 LCSD Result 273.2 MS	Qualifier LCSD Qualifier MS Qualifier	Unit mg/Kg	ent S	D am	%Rec 99 ple ID: I %Rec 109	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa Prep %Rec	Type: So ol Sampl Type: So <u></u>	e Du olubi RPI Lim 2 : FS0
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid Analysis Batch: 43870 Analyte Chloride	3764/3-A 3764/3-A MS 	Qualifier	Added 250 Spike Added 250 Spike Added	Result 247.9 LCSD Result 273.2 MS Result	Qualifier LCSD Qualifier MS Qualifier	Unit Unit Unit	ent S	D am	%Rec 99 ple ID: I 109 %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 %Rec Limits 90 - 110	Type: So DI Sampl Type: So <u>RPD</u> 10 mple ID: Type: So	e Duj olubi RPI Lim 2 s: FS0 olubi
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid Analysis Batch: 43870 Analyte Chloride	3764/3-A 3764/3-A MS 	Qualifier	Added 250 Spike Added 250 Spike Added	Result 247.9 LCSD Result 273.2 MS Result	Qualifier LCSD Qualifier MS Qualifier	Unit Unit Unit	ent S	D am	%Rec 99 ple ID: I 109 %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa 90 - 110 Client Sa	Type: So ol Sampl Type: So <u>RPD</u> 10 mple ID: Type: So 	e Du olubi RP Lim 2 : FS0 olubi
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid Analyte Chloride Lab Sample ID: 890-3816-2 M	3764/3-A 3764/3-A MS 	Qualifier	Added 250 Spike Added 250 Spike Added	Result 247.9 LCSD Result 273.2 MS Result	Qualifier LCSD Qualifier MS Qualifier	Unit Unit Unit	ent S	D am	%Rec 99 ple ID: I 109 %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa 90 - 110 Client Sa	Type: So DI Sampl Type: So <u>RPD</u> 10 mple ID: Type: So	e Du olubi RPI Lim 2 : FS0: olubi
Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid Analyte Chloride Lab Sample ID: 890-3816-2 M	3764/3-A 3764/3-A MS <u>Sample</u> <u>Result</u> 46.3	Qualifier F1	Added 250 Spike Added 250 Spike Added 252	Result 247.9 LCSD Result 273.2 MS Result 329.5	Qualifier LCSD Qualifier MS Qualifier F1	Unit Unit Unit	ent S	D am	%Rec 99 ple ID: I 109 %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa 90 - 110 Client Sa 90 - 110	Type: So ol Sampl Type: So <u>RPD</u> 10 mple ID: Type: So 	e Dup oluble RPI Limi 20 : FS02 oluble
Lab Sample ID: LCS 880-437 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: LCSD 880-43 Matrix: Solid Analysis Batch: 43870 Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid Analyte Chloride Lab Sample ID: 890-3816-2 M Matrix: Solid Analyte Analyte Analysis Batch: 43870 Analyte	3764/3-A 3764/3-A VIS <u>Sample</u> <u>Result</u> 46.3 VISD Sample	Qualifier	Added 250 Spike Added 250 Spike Added	Result 247.9 LCSD Result 273.2 MS Result 329.5	Qualifier LCSD Qualifier MS Qualifier	Unit Unit Unit	ent S	D am	%Rec 99 ple ID: I 109 %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sa 90 - 110 Client Sa	Type: So ol Sampl Type: So <u>RPD</u> 10 mple ID: Type: So 	e Dup oluble RPI Limi 2 : FS0: oluble

Client: Ensolum Project/Site: SEMU Eumont #117 Job ID: 890-3816-1 SDG: Lea County NM

#### **GC VOA**

#### Prep Batch: 43675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-43675/5-A	Method Blank	Total/NA	Solid	5035	
Analysis Batch: 43697					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3816-1	FS01	Total/NA	Solid	8021B	43731
890-3816-2	FS02	Total/NA	Solid	8021B	43731
890-3816-3	FS03	Total/NA	Solid	8021B	43731
890-3816-4	FS04	Total/NA	Solid	8021B	43731
MB 880-43675/5-A	Method Blank	Total/NA	Solid	8021B	43675
MB 880-43731/5-A	Method Blank	Total/NA	Solid	8021B	43731
LCS 880-43731/1-A	Lab Control Sample	Total/NA	Solid	8021B	43731
LCSD 880-43731/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43731

Total/NA

Total/NA

Solid

Solid

8021B

8021B

# 890-3815-A-3-E MSD Prep Batch: 43731

890-3815-A-3-D MS

Matrix Spike

Matrix Spike Duplicate

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3816-1	FS01	Total/NA	Solid	5035	
890-3816-2	FS02	Total/NA	Solid	5035	
890-3816-3	FS03	Total/NA	Solid	5035	
890-3816-4	FS04	Total/NA	Solid	5035	
MB 880-43731/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43731/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43731/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3815-A-3-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3815-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 43815

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3816-1	FS01	Total/NA	Solid	Total BTEX	
890-3816-2	FS02	Total/NA	Solid	Total BTEX	
890-3816-3	FS03	Total/NA	Solid	Total BTEX	
890-3816-4	FS04	Total/NA	Solid	Total BTEX	

# GC Semi VOA

#### Analysis Batch: 43692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3816-1	FS01	Total/NA	Solid	8015B NM	43699
890-3816-2	FS02	Total/NA	Solid	8015B NM	43699
890-3816-3	FS03	Total/NA	Solid	8015B NM	43699
890-3816-4	FS04	Total/NA	Solid	8015B NM	43699
MB 880-43699/1-A	Method Blank	Total/NA	Solid	8015B NM	43699
LCS 880-43699/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43699
LCSD 880-43699/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43699
890-3772-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	43699
890-3772-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43699
Prep Batch: 43699					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3816-1	FS01	Total/NA	Solid	8015NM Prep	

5

8

12 13

43731

43731

Client: Ensolum Project/Site: SEMU Eumont #117

# GC Semi VOA (Continued)

## Prep Batch: 43699 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3816-2	FS02	Total/NA	Solid	8015NM Prep	
890-3816-3	FS03	Total/NA	Solid	8015NM Prep	
890-3816-4	FS04	Total/NA	Solid	8015NM Prep	
MB 880-43699/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43699/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43699/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3772-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3772-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-3816-1	FS01	Total/NA	Solid	8015 NM
890-3816-2	FS02	Total/NA	Solid	8015 NM
890-3816-3	FS03	Total/NA	Solid	8015 NM
890-3816-4	FS04	Total/NA	Solid	8015 NM

#### HPLC/IC

#### Leach Batch: 43764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3816-1	FS01	Soluble	Solid	DI Leach	
890-3816-2	FS02	Soluble	Solid	DI Leach	
890-3816-3	FS03	Soluble	Solid	DI Leach	
890-3816-4	FS04	Soluble	Solid	DI Leach	
MB 880-43764/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43764/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43764/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3816-2 MS	FS02	Soluble	Solid	DI Leach	
890-3816-2 MSD	FS02	Soluble	Solid	DI Leach	

#### Analysis Batch: 43870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3816-1	FS01	Soluble	Solid	300.0	43764
890-3816-2	FS02	Soluble	Solid	300.0	43764
890-3816-3	FS03	Soluble	Solid	300.0	43764
890-3816-4	FS04	Soluble	Solid	300.0	43764
MB 880-43764/1-A	Method Blank	Soluble	Solid	300.0	43764
LCS 880-43764/2-A	Lab Control Sample	Soluble	Solid	300.0	43764
LCSD 880-43764/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43764
890-3816-2 MS	FS02	Soluble	Solid	300.0	43764
890-3816-2 MSD	FS02	Soluble	Solid	300.0	43764

Page 175 of 244

## Job ID: 890-3816-1 SDG: Lea County NM

Job ID: 890-3816-1 SDG: Lea County NM

# Lab Sample ID: 890-3816-1 Matrix: Solid

Date Collected: 01/10/23 10:45 Date Received: 01/10/23 13:11

**Client Sample ID: FS01** 

Project/Site: SEMU Eumont #117

Client: Ensolum

	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	43731	01/11/23 10:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43697	01/12/23 01:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43815	01/12/23 13:07	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43831	01/12/23 14:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43699	01/11/23 08:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43692	01/11/23 18:07	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	43764	01/11/23 15:11	KS	EET MID
Soluble	Analysis	300.0		1			43870	01/13/23 03:34	СН	EET MID

# **Client Sample ID: FS02**

# Date Collected: 01/10/23 10:50

Date Received: 01/10/23 13:11

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	43731	01/11/23 10:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43697	01/12/23 03:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43815	01/12/23 13:07	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43831	01/12/23 14:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43699	01/11/23 08:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43692	01/11/23 18:29	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	43764	01/11/23 15:11	KS	EET MID
Soluble	Analysis	300.0		1			43870	01/13/23 03:38	СН	EET MID

# **Client Sample ID: FS03**

#### Date Collected: 01/10/23 10:55 Date Received: 01/10/23 13:11

	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	43731	01/11/23 10:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43697	01/12/23 04:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43815	01/12/23 13:07	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43831	01/12/23 14:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	43699	01/11/23 08:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43692	01/11/23 18:52	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	43764	01/11/23 15:11	KS	EET MID
Soluble	Analysis	300.0		1			43870	01/13/23 03:53	СН	EET MID

#### **Client Sample ID: FS04** Date Collected: 01/10/23 11:00 Date Received: 01/10/23 13:11

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	43731	01/11/23 10:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43697	01/12/23 04:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43815	01/12/23 13:07	AJ	EET MID

**Eurofins Carlsbad** 

Matrix: Solid

#### Lab Sample ID: 890-3816-2 Matrix: Solid

9

5 6

# Lab Sample ID: 890-3816-3

Lab Sample ID: 890-3816-4

#### Matrix: Solid

Released to Imaging: 2/20/2023 2:06:44 PM

Job ID: 890-3816-1 SDG: Lea County NM

Matrix: Solid

Lab Sample ID: 890-3816-4

## Client Sample ID: FS04 Date Collected: 01/10/23 11:00

Project/Site: SEMU Eumont #117

Date Received: 01/10/23 13:11

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			43831	01/12/23 14:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43699	01/11/23 08:24	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43692	01/11/23 19:14	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43764	01/11/23 15:11	KS	EET MID
Soluble	Analysis	300.0		1			43870	01/13/23 03:57	СН	EET MID

Laboratory References:

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

Eurofins Carlsbad

Released to Imaging: 2/20/2023 2:06:44 PM

	Accreuitation/Co	er unication Summary		
17			Job ID: 890-3816-1 SDG: Lea County NM	
land this laborate	ory were covered under each acci	editation/certification below.		
	Program	Identification Number	Expiration Date	
d in this ron	NELAP	T104704400-22-25	06-30-23	5
tion.	Matrix	Analvte		

Eurofins Carlsbad

Received	by	OCD:	2/2/2023	9:39:03	A

Client: Ensolum Project/Site: SEMU Eumont #11

# Laboratory: Eurofins Midl

Unless otherwise noted, all analytes for

Authority	Pi	rogram	Identification Number	Expiration Date
Texas	N	ELAP	T104704400-22-25	06-30-23
0,	· · ·	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for v
the agency does not o	offer certification.			
the agency does not o Analysis Method	Prep Method	Matrix	Analyte	
0 ,		Matrix Solid	Analyte Total TPH	

# **Method Summary**

Client: Ensolum Project/Site: SEMU Eumont #117 Job ID: 890-3816-1 SDG: Lea County NM

Nethod	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
lotal BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
800.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
3015NM Prep	Microextraction	SW846	EET MID
OI 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

Page 180 of 244

#### Job ID: 890-3816-1 SDG: Lea County NM

Client: Ensolum Project/Site: SEMU Eumont #117

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth																									
890-3816-1	FS01	Solid	01/10/23 10:45	01/10/23 13:11	4.5	4																								
890-3816-2	FS02	Solid	01/10/23 10:50	01/10/23 13:11	4.5																									
390-3816-3	FS03	Solid	01/10/23 10:55	01/10/23 13:11	4.5	5																								
390-3816-4	FS04	Solid	01/10/23 11:00	01/10/23 13:11	4.5																									
						8																								
						9																								
						1																								
5 3 -	Relinguished 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 \$55.00 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.	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed					FWY	F50-3		FS01	Sample Identification M	Total Containers:	Sample Custody Seals: Yes No N/A	Cooler Custody Seals: Yes No MA	Samples Received Intact: (Yes) No	SAMPLE RECEIPT Temp Blank:	PO #:	Sampler's Name: CONNER Short	Project Location: LER LOUNTY,NM	Project Number: 0322057041	Project Name: SEMU ENMONT #117	Phone: 432.557.2	City, State ZIP: MIDLAND, TX	Address: boin mynerien FELD	Company Name: GNSOLUM LLC	Project Manager: HADLIC WREEN		Xenco	eurofins Envi
--------------------------------------	------------------------------	---	--	--	---	-----	---	---------------	--------------	-----------------	----------------	-------------------------	------------------------	----------------------------------	---------------------------------	-----------------------------------	-------------------------------------	------------------	--------------------------------	---------------------------------	-------------------------------------	--------------------------------	------------------	------------------------------	-----------------------------	---------------------------	-------------------------------	---	--	---
(V) any	Received by: (Signature)	if samples constitutes a valid purchase or of samples and shall not assume any resp pplied to each project and a charge of \$\$	8RCR,		1	660	>	S 1.1033 1100	5501 EPOIL 5	0-501 68.01.1 5	5 1.10 23 1045	Matrix Sampled Sampled	Corrected Temperature:	1	A Correction Factor:	Thermometer ID:	k: Yes No Wet Ice:	tile lab, it iet	TAT starts th	Due Date:	Routine		6895 Email:	10464	FELD SISUTE YOU		Z		0	<b>Environment Testing</b>
	e) D	der from client company to Eurofins onsibility for any losses or expenses I 5 for each sample submitted to Eurof	PM Texas 11 Al Sb As SPLP 6010 : 8RCRA Sb A					4.C' C 2	+	4.5' C 1	Y.S' C 7	Depth Comp Cont	0			Γ	Yes No		TAT starts the day received by	3DAV	Aflush Code	Turn Around	K Jennings Ca	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	Hobbs, NM (575)	EL Paso, TX (915)	Houston, TX (281 Midland, TX (432) 7
10-23 131 <sup>2</sup>	Date/Time Relinqui	Xenco, its affiliates and subcontractors. ncurred by the client If such losses are d ins Xenco, but not analyzed. These term	Ba Be B Cd Ca Cr Co s Ba Be Cd Cr Co Cu F					XXX	×××	× × ×	XXX	Т	TE PH TE										ensolum com	11	11	11	KALEI JOANINGS	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
	Relinquished by: (Signature)	It assigns standard terms and condition fue to circumstances beyond the contra- ns will be enforced unless previously ne	Cu Fe Pb Mg Mn Mo Ni K Pb Mn Mo Ni Se Ag Tl U											-	890-3816 Chain of Custody							ANALYSIS REQUEST	Deliverables:	Reportin	State of Project:	Program:		3199	296	300 9-3334
	Received by: (Signature)	ns ol gotiated.	Se											-	stody										Project:	T/PST PRP	Work Order Comments	www.xenco.com		Work Order No:
Revised Date: 08/25/2020 Rev. 2020.2	re) Date/Time		Ag SiO <sub>2</sub> Na Sr Tl Sn U V Zn Hg: 1631/245.1/7470/7471									Sample Comments		In Acetate+NaUH: 2n	Na 25 203: Naso 3	NaHSU 4: NABIS	H <sub>3</sub> PO <sub>4</sub> : HP			0	None: NO DI Water: H <sub>2</sub> O	Preservative Codes	AUaP1			Brownfields RRC Superfund		n Page 1 of 1		

14

Job Number: 890-3816-1 SDG Number: Lea County NM

List Source: Eurofins Carlsbad

### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3816 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	

14

Job Number: 890-3816-1 SDG Number: Lea County NM

List Source: Eurofins Midland

List Creation: 01/11/23 11:43 AM

### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3816 List Number: 2 Creator: Teel, Brianna

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 2/2/2023 9:39:03 AM



**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Hadlie Green Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 1/18/2023 1:38:49 PM

## JOB DESCRIPTION

SEMU EUMONT #17 SDG NUMBER 03D2057041

## **JOB NUMBER**

890-3869-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

Received by OCD: 2/2/2023 9:39:03 AM

## **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

RAMER

Generated 1/18/2023 1:38:49 PM

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

1

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

Page 186 of 244

# **Table of Contents**

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	8
QC Sample Results	9
QC Association Summary	13
Lab Chronicle	15
Certification Summary	16
Method Summary	17
Sample Summary	18
Chain of Custody	19
Receipt Checklists	21

Page 187 of 244

	Definitions/Glossary		
Client: Ensolum	1	Job ID: 890-3869-1	
Project/Site: SE	EMU EUMONT #17	SDG: 03D2057041	
Qualifiers			3
GC VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
S1+	Surrogate recovery exceeds control limits, high biased.		5
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.		
			8
HPLC/IC Qualifier	Qualifier Description		0
	Indicates the analyte was analyzed for but not detected.		0
			3
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤ × ¬	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
	Detection Limit (DoD/DOE)		
DL, 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)		
	Limit of Quantitation (DoD/DOE)		
MCL	EPA recommended "Maximum Contaminant Level"		
MDA MDC	Minimum Detectable Activity (Radiochemistry)		
MDC MDL	Minimum Detectable Concentration (Radiochemistry) Method Detection Limit		
MDL			
ML MPN	Minimum Level (Dioxin) Most Probable Number		
MPN MQL	Most Probable Number Method Quantitation Limit		
NC	Not Calculated		
ND	Not Calculated 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)		

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

RPD

TEF

TEQ

TNTC

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

5

#### Job ID: 890-3869-1 SDG: 03D2057041

#### Job ID: 890-3869-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

Project/Site: SEMU EUMONT #17

#### Narrative

Job Narrative 890-3869-1

#### Receipt

The samples were received on 1/16/2023 12:23 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 3.4°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: FS06A (890-3869-1) and FS07A (890-3869-2).

#### GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-3838-A-61-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-3838-A-61-C). 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 880-43991 and analytical batch 880-44129 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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 880-43987/2-A). Evidence of matrix interferences is not obvious.

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

#### HPLC/IC

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

Released to Imaging: 2/20/2023 2:06:44 PM

Job ID: 890-3869-1 SDG: 03D2057041

### Project/Site: SEMU EUMONT #17 **Client Sample ID: FS06A**

Date Collected: 01/16/23 10:05 Date Received: 01/16/23 12:23

Client: Ensolum

Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	0.00298		0.00200	mg/Kg		01/16/23 14:35	01/17/23 17:18	
<b>Foluene</b>	0.0198		0.00200	mg/Kg		01/16/23 14:35	01/17/23 17:18	
Ethylbenzene	0.0241		0.00200	mg/Kg		01/16/23 14:35	01/17/23 17:18	
n-Xylene & p-Xylene	0.0222		0.00399	mg/Kg		01/16/23 14:35	01/17/23 17:18	
o-Xylene	0.0189		0.00200	mg/Kg		01/16/23 14:35	01/17/23 17:18	
Sylenes, Total	0.0411		0.00399	mg/Kg		01/16/23 14:35	01/17/23 17:18	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
-Bromofluorobenzene (Surr)	103		70 - 130			01/16/23 14:35	01/17/23 17:18	
,4-Difluorobenzene (Surr)	84		70 - 130			01/16/23 14:35	01/17/23 17:18	
Method: TAL SOP Total BTEX - T								
nalyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
otal BTEX	0.0880		0.00399	mg/Kg			01/18/23 14:26	
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			01/17/23 16:53	
Nethod: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/17/23 11:00	01/17/23 14:01	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/17/23 11:00	01/17/23 14:01	
DII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/17/23 11:00	01/17/23 14:01	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
I-Chlorooctane	94		70 - 130			01/17/23 11:00	01/17/23 14:01	
o-Terphenyl	82		70 - 130			01/17/23 11:00	01/17/23 14:01	
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	49.0		5.00	mg/Kg			01/17/23 14:42	
						Lab Sar	nple ID: 890- Matri	
Chloride Client Sample ID: FS07A late Collected: 01/16/23 10:10 late Received: 01/16/23 12:23 lample Depth: 4.5'	49.0		5.00	mg/Kg		Lab Sar		
Method: SW846 8021B - Volatile Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil F
Benzene	<0.00201	U	0.00201	mg/Kg		01/16/23 14:35	01/17/23 17:38	
oluene	0.00297		0.00201	mg/Kg		01/16/23 14:35	01/17/23 17:38	
thylbenzene	0.00309		0.00201	mg/Kg		01/16/23 14:35	01/17/23 17:38	
n-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/16/23 14:35	01/17/23 17:38	
	0 00040		0.00201	mg/Kg		01/16/23 14:35	01/17/00 17:00	
o-Xylene	0.00248		0.00201	mg/ng		01/10/23 14.33	01/17/23 17:38	

Xylenes, Total 01/16/23 14:35 01/17/23 17:38 mg/Kg Surrogate %Recovery Qualifier Limits Prepared Analyzed 4-Bromofluorobenzene (Surr) 82 70 - 130 01/16/23 14:35 01/17/23 17:38

<0.00402 U

Eurofins Carlsbad

Lab Sample ID: 890-3869-1 Matrix: Solid 5

Released to Imaging: 2/20/2023 2:06:44 PM

0.00402

1

1

Dil Fac

### **Client Sample Results**

Limits

70 - 130

RL

0.00402

Unit

mg/Kg

Job ID: 890-3869-1 SDG: 03D2057041

### Project/Site: SEMU EUMONT #17 **Client Sample ID: FS07A**

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

Method: TAL SOP Total BTEX - Total BTEX Calculation

Method: SW846 8015B NM - Diesel Range Organ

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

%Recovery Qualifier

Result Qualifier

96

0.00854

Result

<49.9

Result

<49.9

<49.9

<49.9

100

89

%Recovery

Date Collected: 01/16/23 10:10

Date Received: 01/16/23 12:23 Sample Depth: 4.5'

1,4-Difluorobenzene (Surr)

Gasoline Range Organics (GRO)-C6-C10

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Client: Ensolum

Surrogate

Analyte

Analyte

Analyte

C10-C28)

Surrogate

o-Terphenyl

1-Chlorooctane

Total TPH

**Total BTEX** 

## Lab Sample ID: 890-3869-2

Analyzed

01/17/23 17:38

Analyzed

01/18/23 14:26

Prepared

01/16/23 14:35

Prepared

Matrix: Solid

Dil Fac

Dil Fac

1

1

5

Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
U	49.9	mg/Kg			01/17/23 16:53	1	
nics (DRO)	(GC)						
Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	11
U	49.9	mg/Kg		01/17/23 11:00	01/17/23 14:23	1	4.0
U	49.9	mg/Kg		01/17/23 11:00	01/17/23 14:23	1	12
U	49.9	mg/Kg		01/17/23 11:00	01/17/23 14:23	1	13
Qualifier	Limits			Prepared	Analyzed	Dil Fac	14
	70 - 130			01/17/23 11:00	01/17/23 14:23	1	
	70 - 130			01/17/23 11:00	01/17/23 14:23	1	

D

Method: MCAWW 300.0 - Anions, Ic	on Chromato	graphy - Solu	uble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48.4		4.97	mg/Kg			01/17/23 14:48	1

#### **Eurofins Carlsbad**

Released to Imaging: 2/20/2023 2:06:44 PM

## Job ID: 890-3869-1

## SDG: 03D2057041

Prep Type: Total/NA

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-3838-A-61-E MS	Matrix Spike	102	84	·	
890-3838-A-61-F MSD	Matrix Spike Duplicate	134 S1+	93		
890-3869-1	FS06A	103	84		- 5
890-3869-2	FS07A	82	96		
LCS 880-43991/1-A	Lab Control Sample	108	97		
LCSD 880-43991/2-A	Lab Control Sample Dup	111	100		
MB 880-43991/5-A	Method Blank	85	90		
Surrogate Legend					

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
mple ID	Client Sample ID	(70-130)	(70-130)	
3-A-1-D MS	Matrix Spike	90	78	
43-A-1-D MSD	Matrix Spike Duplicate	103	77	
69-1	FS06A	94	82	
2	FS07A	100	89	
43987/2-A	Lab Control Sample	171 S1+	161 S1+	
80-43987/3-A	Lab Control Sample Dup	119	98	
0-43987/1-A	Method Blank	103	103	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Page 191 of 244

12 13

### Prep Type: Total/NA

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

Lab Sample	ID: MB 880-43991/5-A

#### Matrix: Solid Analysis Batch: 44129

-	МВ	МВ					-	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/16/23 14:35	01/17/23 12:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/16/23 14:35	01/17/23 12:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/16/23 14:35	01/17/23 12:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/16/23 14:35	01/17/23 12:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/16/23 14:35	01/17/23 12:29	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/16/23 14:35	01/17/23 12:29	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130			01/16/23 14:35	01/17/23 12:29	1
1,4-Difluorobenzene (Surr)	90		70 - 130			01/16/23 14:35	01/17/23 12:29	1

#### Lab Sample ID: LCS 880-43991/1-A Matrix: Solid

#### Analysis Batch: 44129

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09402		mg/Kg		94	70 - 130	
Toluene	0.100	0.1033		mg/Kg		103	70 - 130	
Ethylbenzene	0.100	0.09664		mg/Kg		97	70 - 130	
m-Xylene & p-Xylene	0.200	0.2150		mg/Kg		107	70 - 130	
o-Xylene	0.100	0.1176		mg/Kg		118	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

### Lab Sample ID: LCSD 880-43991/2-A

### Matrix: Solid

Analysis Batch: 44129								Batch:	43991
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1023		mg/Kg		102	70 - 130	8	35
Toluene	0.100	0.1067		mg/Kg		107	70 - 130	3	35
Ethylbenzene	0.100	0.09902		mg/Kg		99	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2172		mg/Kg		109	70 - 130	1	35
o-Xylene	0.100	0.1197		mg/Kg		120	70 - 130	2	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

### Lab Sample ID: 890-3838-A-61-E MS

### Matrix: Solid

Analysis Batch: 44129									Pre	o Batch: 43991
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U F1	0.0998	0.06666	F1	mg/Kg		67	70 - 130	
Toluene	<0.00199	U	0.0998	0.08616		mg/Kg		86	70 - 130	

Eurofins Carlsbad

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

13

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43991

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 43991

### Released to Imaging: 2/20/2023 2:06:44 PM

Client: Ensolum Project/Site: SEMU EUMONT #17

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

Lab Sample ID: 890-3838-A- Matrix: Solid	-01-E WIS							Client	Sample ID Prep 1	ype: To	
Analysis Batch: 44129										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec	Daton	1000
Analyte	•	Qualifier	Added	Result		Unit	D	%Rec	Limits		
Ethylbenzene	< 0.00199		0.0998	0.09887		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1769		mg/Kg		89	70 - 130		
p-Xylene	<0.00199	U	0.0998	0.09305		mg/Kg		93	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)			70 - 130								
1,4-Difluorobenzene (Surr)	84		70 - 130								
Lab Sample ID: 890-3838-A-	-61-F MSD					Cli	ent Sa	ample IC	): Matrix Sp	oike Dur	olicat
Matrix: Solid										ype: To	
Analysis Batch: 44129										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RP
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Benzene	< 0.00199	U F1	0.100	0.06608	F1	mg/Kg		66	70 - 130	1	3
Toluene	<0.00199	U	0.100	0.07566		mg/Kg		76	70 - 130	13	3
Ethylbenzene	<0.00199	U	0.100	0.08076		mg/Kg		81	70 - 130	20	3
n-Xylene & p-Xylene	<0.00398	U	0.200	0.1847		mg/Kg		92	70 - 130	4	3
o-Xylene	<0.00199	U	0.100	0.1021		mg/Kg		102	70 - 130	9	3
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	134	S1+	70 - 130								
1,4-Difluorobenzene (Surr)	93		70 - 130								
ethod: 8015B NM - Die	aal Dange O	raopioo /F									

### Matrix: Solid Analysis Batch: 44121

	МВ	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/16/23 14:04	01/17/23 11:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/16/23 14:04	01/17/23 11:49	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/16/23 14:04	01/17/23 11:49	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surroyate	/anecovery	Quanner	Lillins
1-Chlorooctane	103		70 - 130
o-Terphenyl	103		70 - 130

### Lab Sample ID: LCS 880-43987/2-A Matrix: Solid

Analysis Batch: 44121							Prep B	atch: 43987
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	876.4		mg/Kg		88	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	923.3		mg/Kg		92	70 - 130	
C10-C28)								

Prep Type: Total/NA

Prep Type: Total/NA Prep Batch: 43987

01/16/23 14:04 01/17/23 11:49

01/17/23 11:49

**Client Sample ID: Lab Control Sample** 

01/16/23 14:04

1

1

Page 193 of 244

### Job ID: 890-3869-1 SDG: 03D2057041

Client: Ensolum Project/Site: SEMU EUMONT #17

Matrix: Solid

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

Lab Sample ID: LCS 880-4398	37/2-A						Client	Sample	D: Lab Co		
Matrix: Solid										ype: To	
Analysis Batch: 44121									Prep	Batch:	43987
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	171	S1+	70 - 130								
o-Terphenyl	161	S1+	70 - 130								
Lab Sample ID: LCSD 880-43	987/3-A					Clier	nt Sami	nle ID: I	Lab Contro	l Samol	e Dun
Matrix: Solid										ype: To	-
Analysis Batch: 44121										Batch:	
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	990.8		mg/Kg		99	70 - 130	12	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	842.9		mg/Kg		84	70 - 130	9	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	119		70 - 130								
o-Terphenyl	98		70 - 130								
Lab Sample ID: 890-3843-A-1-	-D MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid	-D MS							Client		: Matrix ype: To Batch:	tal/NA
Matrix: Solid	-D MS MS	MS						Client	Prep T	ype: To	tal/NA
Matrix: Solid Analysis Batch: 44121	MS		Limits					Client	Prep T	ype: To	tal/NA
Matrix: Solid Analysis Batch: 44121 Surrogate	MS		Limits 70 - 130					Client	Prep T	ype: To	tal/NA
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane	MS %Recovery							Client	Prep T	ype: To	tal/NA
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl	MS %Recovery 90 78		70 - 130			Cli	ient Sa		Prep T Prep	ype: To Batch:	tal/NA 43987
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1	MS %Recovery 90 78		70 - 130			Cli	ient Sa		Prep T Prep 9: Matrix Sp	ype: To Batch: bike Dup	tal/NA 43987 blicate
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1- Matrix: Solid	MS <u>%Recovery</u> 90 78		70 - 130			CI	ient Sa		Prep T Prep 9: Matrix Sp Prep T	ype: To Batch:	tal/NA 43987 blicate tal/NA
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1- Matrix: Solid	MS <u>%Recovery</u> 90 78 -D MSD	Qualifier	70 - 130			Cli	ient Sa		Prep T Prep 9: Matrix Sp Prep T	ype: To Batch: Dike Dup ype: To	tal/NA 43987 blicate tal/NA
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1- Matrix: Solid Analysis Batch: 44121	MS <u>%Recovery</u> 90 78 -D MSD MSD	Qualifier _	70 - 130 70 - 130			Cli	ient Sa		Prep T Prep 9: Matrix Sp Prep T	ype: To Batch: Dike Dup ype: To	tal/NA 43987 blicate tal/NA
Lab Sample ID: 890-3843-A-1- Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1- Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane	MS %Recovery 90 78 -D MSD MSD %Recovery	Qualifier _	70 - 130 70 - 130 Limits			Cli	ient Sa		Prep T Prep 9: Matrix Sp Prep T	ype: To Batch: Dike Dup ype: To	tal/NA 43987 blicate tal/NA
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1 Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane	MS <u>%Recovery</u> 90 78 -D MSD -D MSD <u>%Recovery</u> 103	Qualifier _	70 - 130 70 - 130 <u>Limits</u> 70 - 130			CI	ient Sa		Prep T Prep 9: Matrix Sp Prep T	ype: To Batch: Dike Dup ype: To	tal/NA 43987 blicate tal/NA
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1- Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl	MS %Recovery 90 78 -D MSD %Recovery 103 77	Qualifier	70 - 130 70 - 130 Limits			CI	ient Sa		Prep T Prep 9: Matrix Sp Prep T	ype: To Batch: Dike Dup ype: To	tal/NA 43987 blicate tal/NA
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1- Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl	MS %Recovery 90 78 -D MSD %Recovery 103 77	Qualifier	70 - 130 70 - 130 <u>Limits</u> 70 - 130			Cli	ient Sa		Prep T Prep 9: Matrix Sp Prep T	ype: To Batch: Dike Dup ype: To	tal/NA 43987 blicate tal/NA
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1- Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Iethod: 300.0 - Anions, Ic	MS <u>%Recovery</u> 90 78 -D MSD <u>MSD</u> <u>%Recovery</u> 103 77 Con Chromat	Qualifier	70 - 130 70 - 130 <u>Limits</u> 70 - 130			CI		mple IC	Prep T Prep 9: Matrix Sp Prep T Prep	ype: To Batch: bike Dup ype: To Batch:	tal/NA 43987 blicate tal/NA 43987
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1- Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ic Lab Sample ID: MB 880-44148	MS <u>%Recovery</u> 90 78 -D MSD <u>MSD</u> <u>%Recovery</u> 103 77 Con Chromat	Qualifier	70 - 130 70 - 130 <u>Limits</u> 70 - 130			CI		mple IC	Prep T Prep 9: Matrix Sp Prep T Prep	ype: To Batch: bike Dup ype: To Batch: Method	tal/NA 43987 blicate tal/NA 43987 Blank
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1- Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ic Lab Sample ID: MB 880-44148 Matrix: Solid	MS <u>%Recovery</u> 90 78 -D MSD <u>MSD</u> <u>%Recovery</u> 103 77 Con Chromat	Qualifier	70 - 130 70 - 130 <u>Limits</u> 70 - 130			CI		mple IC	Prep T Prep 9: Matrix Sp Prep T Prep	ype: To Batch: bike Dup ype: To Batch:	tal/NA 43987 blicate tal/NA 43987 Blank
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1- Matrix: Solid Analysis Batch: 44121 Surrogate	MS <u>%Recovery</u> 90 78 -D MSD <u>MSD</u> <u>%Recovery</u> 103 77 Con Chromat	Qualifier MSD Qualifier ography	70 - 130 70 - 130 <u>Limits</u> 70 - 130			CI		mple IC	Prep T Prep 9: Matrix Sp Prep T Prep	ype: To Batch: bike Dup ype: To Batch: Method	tal/NA 43987 blicate tal/NA 43987 Blank
Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-3843-A-1- Matrix: Solid Analysis Batch: 44121 Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ic Lab Sample ID: MB 880-44148 Matrix: Solid	MS <u>%Recovery</u> 90 78 -D MSD <u>MSD</u> <u>%Recovery</u> 103 77 00 Chromat 8/1-A	Qualifier	70 - 130 70 - 130 <u>Limits</u> 70 - 130		Unit	Cli		mple IC	Prep T Prep 9: Matrix Sp Prep T Prep	ype: To Batch: bike Dup ype: To Batch: Method Type: So	tal/NA 43987 blicate tal/NA 43987 Blank

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

Analysis Batch: 44156							
	Spike	LCS	LCS			%Rec	
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	
Chloride	250	254.0	mg/Kg		102	90 - 110	

Eurofins Carlsbad

Released to Imaging: 2/20/2023 2:06:44 PM

Lab Sample ID: LCS 880-44148/2-A

Page 194 of 244

### Job ID: 890-3869-1 SDG: 03D2057041

Project/Site: SEMU EUMONT #17

Client: Ensolum

#### Job ID: 890-3869-1 SDG: 03D2057041

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-441 Matrix: Solid Analysis Batch: 44156	48/3-A					Clier	nt Sam	ple ID:	Lab Contro Prep	ol Sampl Type: S	
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	254.1		mg/Kg		102	90 - 110	0	20
Lab Sample ID: 890-3863-A-1- Matrix: Solid	HMS							Client	Sample ID Prep	): Matrix Type: S	
Analysis Batch: 44156										1990.0	orabic
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	294		252	541.9		mg/Kg		98	90 _ 110		
Lab Sample ID: 890-3863-A-1-	IMSD					Cli	ent Sa	ample IC	): Matrix S	pike Dup	olicate
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 44156											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	294		252	542.0		mg/Kg		99	90 - 110	0	20

Eurofins Carlsbad

### **QC** Association Summary

Client: Ensolum Project/Site: SEMU EUMONT #17

5

Job ID: 890-3869-1 SDG: 03D2057041

### GC VOA

### Prep Batch: 43991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3869-1	FS06A	Total/NA	Solid	5035	
890-3869-2	FS07A	Total/NA	Solid	5035	
MB 880-43991/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43991/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43991/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3838-A-61-E MS	Matrix Spike	Total/NA	Solid	5035	
890-3838-A-61-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 44129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-3869-1	FS06A	Total/NA	Solid	8021B	43991	
890-3869-2	FS07A	Total/NA	Solid	8021B	43991	
MB 880-43991/5-A	Method Blank	Total/NA	Solid	8021B	43991	
LCS 880-43991/1-A	Lab Control Sample	Total/NA	Solid	8021B	43991	
LCSD 880-43991/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43991	
890-3838-A-61-E MS	Matrix Spike	Total/NA	Solid	8021B	43991	
890-3838-A-61-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43991	

#### Analysis Batch: 44270

Lab Sample ID	Client Sample ID	Prep Туре	Matrix	Method	Prep Batch
890-3869-1	FS06A	Total/NA	Solid	Total BTEX	
890-3869-2	FS07A	Total/NA	Solid	Total BTEX	

### GC Semi VOA

#### Prep Batch: 43987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3869-1	FS06A	Total/NA	Solid	8015NM Prep	
890-3869-2	FS07A	Total/NA	Solid	8015NM Prep	
MB 880-43987/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43987/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43987/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3843-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3843-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 44121

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3869-1	FS06A	Total/NA	Solid	8015B NM	43987
890-3869-2	FS07A	Total/NA	Solid	8015B NM	43987
MB 880-43987/1-A	Method Blank	Total/NA	Solid	8015B NM	43987
LCS 880-43987/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43987
LCSD 880-43987/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43987
890-3843-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	43987
890-3843-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43987

#### Analysis Batch: 44204

**Released to Imaging: 2/20/2023 2:06:44 PM** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3869-1	FS06A	Total/NA	Solid	8015 NM	
890-3869-2	FS07A	Total/NA	Solid	8015 NM	

Eurofins Carlsbad

### **QC Association Summary**

Client: Ensolum Project/Site: SEMU EUMONT #17 Job ID: 890-3869-1 SDG: 03D2057041

### HPLC/IC

### Leach Batch: 44148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3869-1	FS06A	Soluble	Solid	DI Leach	
890-3869-2	FS07A	Soluble	Solid	DI Leach	
MB 880-44148/1-A	Method Blank	Soluble	Solid	DI Leach	
_CS 880-44148/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44148/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3863-A-1-H MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3863-A-1-I MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 44156

ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-3869-1	FS06A	Soluble	Solid	DI Leach	
390-3869-2	FS07A	Soluble	Solid	DI Leach	
MB 880-44148/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44148/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44148/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3863-A-1-H MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3863-A-1-I MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
nalysis Batch: 44156					
		Deep True	Madain	Mathad	Dree Detab
nalysis Batch: 44156 Lab Sample ID 890-3869-1	Client Sample ID FS06A	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 44148
Lab Sample ID	Client Sample ID				
Lab Sample ID 890-3869-1	Client Sample ID FS06A	Soluble	Solid	300.0	44148
Lab Sample ID 890-3869-1 890-3869-2	Client Sample ID FS06A FS07A	Soluble	Solid Solid	300.0 300.0	44148
Lab Sample ID 890-3869-1 890-3869-2 MB 880-44148/1-A	Client Sample ID FS06A FS07A Method Blank	Soluble Soluble Soluble	Solid Solid Solid	300.0 300.0 300.0	44148 44148 44148
Lab Sample ID 890-3869-1 890-3869-2 MB 880-44148/1-A LCS 880-44148/2-A	Client Sample ID FS06A FS07A Method Blank Lab Control Sample	Soluble Soluble Soluble Soluble	Solid Solid Solid Solid	300.0 300.0 300.0 300.0	44148 44148 44148 44148 44148

Eurofins Carlsbad

Page 197 of 244

Project/Site: SEMU EUMONT #17

Job ID: 890-3869-1 SDG: 03D2057041

### Lab Sample ID: 890-3869-1 Matrix: Solid

Lab Sample ID: 890-3869-2

Matrix: Solid

Date Collected: 01/16/23 10:05 Date Received: 01/16/23 12:23

**Client Sample ID: FS06A** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	43991	01/16/23 14:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44129	01/17/23 17:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44270	01/18/23 14:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			44204	01/17/23 16:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43987	01/17/23 11:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44121	01/17/23 14:01	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44148	01/17/23 11:25	KS	EET MID
Soluble	Analysis	300.0		1			44156	01/17/23 14:42	СН	EET MID

#### Client Sample ID: FS07A Date Collected: 01/16/23 10:10

Date Received: 01/16/23 12:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	43991	01/16/23 14:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44129	01/17/23 17:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44270	01/18/23 14:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			44204	01/17/23 16:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43987	01/17/23 11:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44121	01/17/23 14:23	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	44148	01/17/23 11:25	KS	EET MID
Soluble	Analysis	300.0		1			44156	01/17/23 14:48	СН	EET MID

#### Laboratory References:

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

Eurofins Carlsbad

Page 198 of 244

5 6

	•	loor outlation o	or anotation of animally		
Client: Ensolum Project/Site: SEMU EU	MONT #17			Job ID: 890-3869-1 SDG: 03D2057041	2
Laboratory: Eurofi					
		ere covered under each acc	reditation/certification below.		
Authority	Pr	ogram	Identification Number	Expiration Date	
Texas	NE	ELAP	T104704400-22-25	06-30-23	
The following analytes	are included in this report. bu	it the laboratory is not certif	fied by the governing authority. This list ma	av include analytes for which	5
the agency does not of		,	, , , , , , , , , , , , , , , , , , , ,	, ,	
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					-
					13

Eurofins Carlsbad

Job ID: 890-3869-1 SDG: 03D2057041

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
SW846 =	= "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, Ma "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Ed = TestAmerica Laboratories, Standard Operating Procedure		
Laboratory R	eferences: = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

#### Laboratory References:

Eurofins Carlsbad

### Job ID: 890-3869-1 SDG: 03D2057041

Client: Ensolum Project/Site: SEMU EUMONT #17

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-3869-1	FS06A	Solid	01/16/23 10:05	01/16/23 12:23	4.5'	
890-3869-2	FS07A	Solid	01/16/23 10:10	01/16/23 12:23	4.5'	
						5
						8
						9
						1:
						1
						1

💸 eurotins		sting	Midland, TX (	Filosofi, 14 (432) 704-5440, San Antonio, TX (414) 509-3334	o, TX (210) 509-3334	Woi	Work Order No:
	Xenco		EL Paso, TX Hobbs, NM	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	TX (806) 794-1296 NM (575) 988-3199		
ant Manager	Hadles Spean		Bill to: (if different)	Kale, tuning	IVES (	2	Work Order Comments
Company Name:	20	0	Company Name:		L.	Program: UST/PST	UST/PST PRP Brownfields
Address:	601 N. Manenfeld St. Suite	YOU	Address:			State of Project:	
e ZIP:	(ICENT XI ANNOIN		City, State ZIP:	11		Reporting: Level II Level III	
		Email:	Liconiuss (?	ensolum.com	2	Deliverables: EDD	ADaPT
Project Name:	SEMU ENMONT #117	Turn Around	round		ANALYSIS REQUEST	JEST	
Project Number:	13030257041	Routine	Rush Pres.	0.			None: NO
Project Location:	LEA LOUNTY, MM	Due Date:	MARE				Cool: Cool
Sampler's Name:	Conver Stible	TAT starts the day received by the lab, if received by 4:30pm	ay received by /ed by 4:30pm				HCL: HC
SAMPLE RECEIPT	Temp Blank: Res No	Wet Ice:	(res) No eters				H <sub>3</sub> PO 4: HP
Samples Received Intact:	Mes No 1	ter ID:	ğ	21			NaHSO 4: NABIS
Cooler Custody Seals:	Yes No WA Correction Factor:	Factor:	Ś	d	890-3869 Cha	hain of Custody	Na 25 20 3: NaSO 3
Sample Custody Seals:	Yes NG (NA	Temperature Reading: Corrected Temperature:	n'u 1	nlor EX PH		_	Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC
Sample Identification	Matrix		Depth Grab/ # of Comp Cont	C BT			
FSOLA	51.1613	1005	t 7 15h	×			
FSDTA	21-1-13	1010	1.51 6 7	× ×			
			22				
	2	1.10	10				
		1					
	X						
0							
Total 200.7 / 6010 Circle Method(s) ar	200.8 / 6020: nd Metal(s) to be analyzed	8RCRA 13PPM TCLP / SPLP	/ Texas 11 AI Sb LP 6010 : 8RCRA SI	b As Ba Be B Cd Sb As Ba Be Cd C	Ca Cr Co Cu Fe Pb r Co Cu Pb Mn Mo I	vi K Se	Ag SiO <sub>2</sub> Na Sr TI Sn U Hg: 1631/245.1/7470 .
lotice: Signature of this doc if service. Eurofins Xenco w f Eurofins Xenco. A minimu	Notce: 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 lable 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 service. Eurofins Xenco, but motions the control of service is antihum change of \$35.00 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 nego	a valid purchase order ot assume any respon: t and a charge of \$5 fo	from client company to Eu sibility for any losses or exp r each sample submitted to	rofins Xenco, its affiliates and enses incurred by the client if ; b Eurofins Xenco, but not anah		<ul> <li>terms and conditions</li> <li>es beyond the control</li> <li>unless previously negotiated.</li> </ul>	
Relinquished by: (Signature)	: (Signature) Receive	Received by: (Signature)		Date/Time		nature) Receive	Received by: (Signature)
P	3	No X	tut 1	-16-23 12	e c		
	ちょうく		/		4		

### Received by OCD: 2/2/2023 9:39:03 AM

1089 N Canal St	)	•	)	J		_	•															
Carlsbad NM 88220 Phone 575-988-3199 Fax: 575-988-3199	c	nain	Chain of Custody Record	lody K	ec	ord	_						F.	网络								Environment Testing
Client Information (Sub Contract Lab)	Sampler <sup>.</sup>			Lab PM Krame	<sub>Lab PM</sub> Kramer Jessica	ssic	۵ ا						Car	Carrier Tracking No(s)	rackir	g No	s)			<u>8 0</u>	COC No: 890-1102 1	
Client Contact Shipping/Receiving	Phone			E-Mail <sup>.</sup> Jessic	E-Mail <sup>.</sup> Jessica Kramer@et eurofinsus com	amer	@et	euro	ภ์เกรเ	IS CO	m		Ne	State of Origin. New Mexico	Drigin	Ŭ				קק	Page: Page 1 of 1	
Company Eurofins Environment Testing South Centr		-			Accreditations Required (See note) NELAP - Texas	√P - 1	is Rec lexa:	uired	(See r	note)										<u>ᅇ</u> 등	Job #: 890-3869-1	
Address. 1211 W Florida Ave, ,	Due Date Requested 1/17/2023	ă							>	Analysis	/sis	ନ୍ଦ	Requested	ste	≏						n Code	סתנ
City Midland	TAT Requested (days)	ıys).				<u>ulumasi</u>					-	-1							i,	ດຫ>	HCL N NaOH N Zn Acetate O	е аО2
State Zip: TX, 79701					<u>itterförga</u>	I TPH											*****				Nitric Acid Q NaHSO4 Q	Na2O4S Na2SO3
Phone 432-704-5440(Tel)	PO #				<u>)</u>	D) Ful		de												E G TI	Amchlor S Amchlor T	H2SO4 TSP Dodecahydrate
Email	WO #				20.2 X 40 Y	-103-18		Chiori	EX										, Maria da Antonio da Anto	nath-6422nai	Ice V	A
Project Name SEMU EUMONT #17	Project #: 89000094				ARY "10" "787	followdolli		EACH	OD) B										talaa		EDTA Y EDA Y	pH 4-5 Trizma other (specify)
Sile	SSOW#				0.0000000000000000000000000000000000000	ardda orddiolla		D/DI_L	Calc (N	:v									AT 6.64	Mandataria		
		Sample	Sample Type (C=comp,	IVIQTTIX (W≕water S=solid, O≕waste/oil, BT=Tissue,	eld Filtered rform MS/I	15MOD_NM/	15MOD_Calc	ORGFM_2	21B/5035FP_	al_BTEX_G					····				tal Number			
	X	X	Preservation Code:	ion Code:	10000 AV10	10.201 10	8	3	8	T				1986 1987 1987	<u>.</u>	-	17-12-12 1 1		4	$\Delta$	Special Instructions/Note.	ons/Note.
FS06A (890-3869-1)	1/16/23	10 05 Mountain		Solid		×	×	×	×	×			1				0.10			د نیکیند ا		
FS07A (890-3869-2)	1/16/23	10 10 Mountain		Solid		×	×	×	×	×									ال يُعتبر ا	) ( <del>1993)</del> 2-10-10-10-10-10-10-10-10-10-10-10-10-10-		
																				underford and age		
						1																
																				and the second		
Note Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/hests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC	nt Testing South Cent Sove for analysis/tests	ral LLC place s/matrix being nmediately if	s the ownership analyzed the s: all requested a	of method an amples must bu ccreditations a	alyte & shipp e curre	accre ed bac	ditatio k to ti date r	n con etum	iplianc rofins the sig	>e upc Enviro	n our Chain	nt Tes	ontra ting s	t labo outh	Cent ting t	al, LL said	his s C lab	ample	shipi y or c	nent	ces the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the ig analyzed the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to if all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC.	custody If the Any changes to th Central LLC
Possible Hazard Identification					ŝ	Sample Disposal	e Dis	pos	al ( /	( A fee may be assessed if samples are	ma)	]6	ass	esse	dif	sam	ples	are	reta	inec	retained longer than 1 month) ┐	
Deliverable Requested 1 II III IV Other (specify)	Primary Deliverable Rank	able Rank	2		ŝ	Special Instructions/QC Requirements	Inst	ructio	al Instructions/QC	C R	equi	rem	ents	ents	by	ap			E	AICHIVE		WONTINS
Empty Kit Relinquished by		Date			Time	$\geq$						>		Me	thod	of Shi	Method of Shipment.					
Relinquished by:	Date/Time			Company		- 7		r"	뇌		7	×	1	ŀ		D	Date/Time:	ne:			Company	٧٢
Relinquished by	Date/Time			Company		Rec	Received			K						D	Date/Time:	ne:			Company	γ
	Date/Time			Company		Rec	Received by	by:								D	Date/Time	ne			Company	γ
△ Yes △ No						Coo	ler Te	mpera	Cooler Temperature(s) °C and Other Remarks	း) "င်း	Ind O	ther F	lemar	ks								

### Page 203 of 244

**Eurofins Carlsbad** 

5



Job Number: 890-3869-1 SDG Number: 03D2057041

List Source: Eurofins Carlsbad

### Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 3869 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	

14

Job Number: 890-3869-1 SDG Number: 03D2057041

List Source: Eurofins Midland

List Creation: 01/17/23 11:09 AM

### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3869 List Number: 2 Creator: Teel, Brianna

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").



**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Kalei Jennings Ensolum 705 W. Wadley Suite 210 Midland Texas 79701 Generated 11/17/2022 1:13:26 PM

## JOB DESCRIPTION

SEMU Eumont 117 SDG NUMBER New Mexico

## **JOB NUMBER**

880-21450-1

Eurofins Midland 1211 W. Florida Ave Midland TX 79701



Laboratory Job ID: 880-21450-1 SDG: New Mexico

# **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	11
Lab Chronicle	13
Certification Summary	14
Method Summary	15
Sample Summary	16
Chain of Custody	17
Receipt Checklists	18
Appendix	19

2

Page 208 of 244

	Definitions/Glossary		
Client: Ensolun	-	Job ID: 880-21450-1	
Project/Site: SE	EMU Eumont 117	SDG: New Mexico	
Qualifiers			
GC VOA			
Qualifier	Qualifier Description		
S1+	Surrogate recovery exceeds control limits, high biased.		-
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		4
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		

Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count

Reporting Limit or Requested Limit (Radiochemistry)

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

Method Quantitation Limit

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

ML

MPN

MQL

NC

ND NEG

POS

PQL PRES

QC

RER RL

RPD TEF

TEQ TNTC

5

### Job ID: 880-21450-1 SDG: New Mexico

### Job ID: 880-21450-1

Client: Ensolum

### Laboratory: Eurofins Midland

Project/Site: SEMU Eumont 117

#### Narrative

Job Narrative 880-21450-1

#### Receipt

The samples were received on 11/10/2022 3:57 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.5°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (880-21450-1) and SS02 (880-21450-2).

#### GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS01 (880-21450-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

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

5

Job ID: 880-21450-1 SDG: New Mexico

Lab Sample ID: 880-21450-1

### **Client Sample ID: SS01**

Project/Site: SEMU Eumont 117

Client: Ensolum

Date Collected: 11/08/22 11:30 Date Received: 11/10/22 15:57

Method: SW846 8021B - Volatile								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.51		0.202	mg/Kg		11/15/22 13:19	11/16/22 04:36	100
Toluene	26.1		0.202	mg/Kg		11/15/22 13:19	11/16/22 04:36	100
Ethylbenzene	31.9		0.202	mg/Kg		11/15/22 13:19	11/16/22 04:36	100
m-Xylene & p-Xylene	41.9		0.403	mg/Kg		11/15/22 13:19	11/16/22 04:36	100
o-Xylene	16.4		0.202	mg/Kg		11/15/22 13:19	11/16/22 04:36	100
Xylenes, Total	58.3		0.403	mg/Kg		11/15/22 13:19	11/16/22 04:36	100
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	195	S1+	70 - 130			11/15/22 13:19	11/16/22 04:36	100
1,4-Difluorobenzene (Surr)	111		70 - 130			11/15/22 13:19	11/16/22 04:36	100
Method: TAL SOP Total BTEX -	Total BTEX Calo	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	118		0.403	mg/Kg			11/16/22 10:36	1
Method: SW846 8015 NM - Dies	el Range Organ	ics (DRO) (	GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	7380		250	mg/Kg			11/14/22 13:38	1
Method: SW846 8015B NM - Die Analyte		Qualifier	(GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	2110		250	mg/Kg		11/11/22 09:33	11/13/22 13:59	5
Diesel Range Organics (Over C10-C28)	3380		250	mg/Kg		11/11/22 09:33	11/13/22 13:59	5
Oll Range Organics (Over C28-C36)	1890		250	mg/Kg		11/11/22 09:33	11/13/22 13:59	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130			11/11/22 09:33	11/13/22 13:59	5
o-Terphenyl	96		70 - 130			11/11/22 09:33	11/13/22 13:59	5
Method: MCAWW 300.0 - Anion	s, Ion Chromato	ography - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	590		4.97	mg/Kg			11/16/22 17:14	1
lient Sample ID: SS02						Lab Sam	ple ID: 880-2	1450-2
ate Collected: 11/08/22 11:33							Matri	x: Solic
ate Received: 11/10/22 15:57 ample Depth: 0.5								
Method: SW846 8021B - Volatile	organic Comp	ounds (GC	)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0996	U	0.0996	mg/Kg		11/15/22 13:19	11/16/22 04:57	50
						44/45/00 40:40	44/40/00 04-57	
Toluene	0.350		0.0996	mg/Kg		11/15/22 13:19	11/16/22 04:57	50

11/16/22 04:57

11/16/22 04:57

11/16/22 04:57

11/16/22 04:57

Released to Imaging: 2/20/2023 2:06:44 PM

Ethylbenzene

**Xylenes**, Total

o-Xylene

m-Xylene & p-Xylene

0.0996

0.199

0.0996

0.199

mg/Kg

mg/Kg

mg/Kg

mg/Kg

11/15/22 13:19

11/15/22 13:19

11/15/22 13:19

11/15/22 13:19

0.180

0.216

0.118

0.334

11/17/2022

50

50

50

### **Client Sample Results**

Job ID: 880-21450-1 SDG: New Mexico

Lab Sample ID: 880-21450-2

# Project/Site: SEMU Eumont 117 Client Sample ID: SS02

Date Collected: 11/08/22 11:33

Date Received: 11/10/22 15:57 Sample Depth: 0.5

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			11/15/22 13:19	11/16/22 04:57	50
1,4-Difluorobenzene (Surr)	117		70 - 130			11/15/22 13:19	11/16/22 04:57	50
Method: TAL SOP Total BTEX - T	otal BTEX Calo	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.864		0.199	mg/Kg			11/16/22 10:36	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/14/22 13:38	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		11/11/22 09:33	11/13/22 13:17	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		11/11/22 09:33	11/13/22 13:17	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/11/22 09:33	11/13/22 13:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130			11/11/22 09:33	11/13/22 13:17	1
o-Terphenyl	95		70 - 130			11/11/22 09:33	11/13/22 13:17	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	graphy - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43.7		4.96	mg/Kg			11/16/22 17:36	- 1

Matrix: Solid

Client: Ensolum Project/Site: SEMU Eumont 117

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

_			
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-21450-1	SS01	195 S1+	111
880-21450-2	SS02	114	117
880-21552-A-3-E MS	Matrix Spike	100	115
880-21552-A-3-F MSD	Matrix Spike Duplicate	102	117
LCS 880-39618/1-A	Lab Control Sample	101	112
LCSD 880-39618/2-A	Lab Control Sample Dup	90	117
MB 880-39499/5-A	Method Blank	81	98
MB 880-39618/5-A	Method Blank	80	100
Ourse sets to see at			

Surrogate Legend BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

		1CO1	OTPH1	Percent Surrogate Recovery (Acceptance Limits)	1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-21450-1	SS01	107	96		1
880-21450-2	SS02	89	95		
890-3422-A-1-B MS	Matrix Spike	87	81		
890-3422-A-1-C MSD	Matrix Spike Duplicate	78	72		
LCS 880-39298/2-A	Lab Control Sample	105	113		
LCSD 880-39298/3-A	Lab Control Sample Dup	92	98		
MB 880-39298/1-A	Method Blank	104	122		

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 880-21450-1 SDG: New Mexico

**Eurofins Midland** 

Client: Ensolum Project/Site: SEMU Eumont 117

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

 Lab Sample ID: MB 880-39499/5-	A									Client Sa	mple ID: Met	hod	Blank
Matrix: Solid											Prep Type		
Analysis Batch: 39575											Prep Ba		
· ·····, ····		ΜВ	мв										
Analyte	Re	sult		RI	_	Unit		D	Р	repared	Analyzed		Dil Fac
Benzene	<0.00			0.00200	)	mg/K	a	—		4/22 13:45	11/15/22 10:39		1
Toluene	<0.00	200	U	0.00200	)	mg/K	-		11/1	4/22 13:45	11/15/22 10:39	9	1
Ethylbenzene	<0.00			0.00200		mg/K				4/22 13:45	11/15/22 10:39		1
m-Xylene & p-Xylene	<0.00			0.00400		mg/K				4/22 13:45	11/15/22 10:39		
o-Xylene	<0.00			0.00200		mg/K				4/22 13:45	11/15/22 10:39		1
Xylenes, Total	<0.00			0.00400		mg/K	-			4/22 13:45	11/15/22 10:39		1
Aylenes, Total	-0.00	400	0	0.00400	,	ing/iv	9		11/1	4/22 10.40	11/13/22 10:33	,	
		MB	MB										
Surrogate	%Reco	very	Qualifier	Limits					P	repared	Analyzed		Dil Fac
4-Bromofluorobenzene (Surr)		81		70 - 130	-				11/1	4/22 13:45	11/15/22 10:3	9	1
1,4-Difluorobenzene (Surr)		98		70 - 130					11/1	4/22 13:45	11/15/22 10:3	9	1
Lab Sample ID: MB 880-39618/5-	Α									<b>Client Sa</b>	mple ID: Met	hod	Blank
Matrix: Solid											Prep Type	: <b>To</b>	tal/NA
Analysis Batch: 39575											Prep Ba	tch:	<b>3961</b> 8
		MB	MB										
Analyte	Re	sult	Qualifier	RL	-	Unit		D	Р	repared	Analyzed		Dil Fac
Benzene	<0.00	200	U	0.00200	)	mg/K	g	_	11/1	5/22 13:19	11/15/22 22:04	1	1
Toluene	<0.00	200	U	0.00200	)	mg/K	g		11/1	5/22 13:19	11/15/22 22:04	1	1
Ethylbenzene	<0.00	200	U	0.00200	)	mg/K	g		11/1	5/22 13:19	11/15/22 22:04	1	1
m-Xylene & p-Xylene	<0.00	400	U	0.00400	)	mg/K	g		11/1	5/22 13:19	11/15/22 22:04	1	1
o-Xylene	<0.00	200	U	0.00200	)	mg/K	g		11/1	5/22 13:19	11/15/22 22:04	1	1
Xylenes, Total	<0.00	400	U	0.00400	)	mg/K	g		11/1	5/22 13:19	11/15/22 22:04	1	1
						Ū							
		MВ	МВ										
Surrogate	%Reco	very	Qualifier	Limits	_				<b>P</b>	repared	Analyzed		Dil Fac
4-Bromofluorobenzene (Surr)		80		70 - 130					11/1	5/22 13:19	11/15/22 22:04	4	1
1,4-Difluorobenzene (Surr)		100		70 - 130					11/1	5/22 13:19	11/15/22 22:04	4	1
Lab Sample ID: LCS 880-39618/1	- <b>A</b>							С	lient	Sample	D: Lab Contr		
Matrix: Solid											Prep Type		
Analysis Batch: 39575											Prep Ba	tch:	39618
				Spike		LCS					%Rec		
Analyte				Added		Qualifier	Unit		_ <u>D</u>	%Rec	Limits		
Benzene				0.100	0.09400		mg/Kg			94	70 - 130		
Toluene				0.100	0.08714		mg/Kg			87	70 - 130		
Ethylbenzene				0.100	0.08717		mg/Kg			87	70 - 130		
m-Xylene & p-Xylene				0.200	0.1821		mg/Kg			91	70 - 130		
o-Xylene				0.100	0.09084		mg/Kg			91	70 - 130		
	1.05	100											
Surrensete	LCS			Lincita									
Surrogate	%Recovery	Qua	inter	Limits									
4-Bromofluorobenzene (Surr)	101			70 - 130 70 - 130									
1,4-Difluorobenzene (Surr)	112			70 - 130									
Lab Sample ID: LCSD 880-39618	1 <b>2</b> -A						0	iont	Sam		ab Control Sa	me	
Matrix: Solid	1 <b>2-1</b> 1							ent	Sail	ipie iD. Li	Prep Type		
Analysis Batch: 39575				Spike	1000	LCSD					Prep Ba	icn:	
Analyta				Spike Addod			l Init		P	% Bee	%Rec	חסמ	RPD Limit
Analyte				Added		Qualifier			D	%Rec			Limit
Benzene				0.100	0.1023		mg/Kg			102	70 - 130	8	35

5

7

Job ID: 880-21450-1 SDG: New Mexico

Eurofins Midland

Project/Site: SEMU Eumont 117

Client: Ensolum

### Job ID: 880-21450-1 SDG: New Mexico

### Mathad: 2021B Valatila Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-3961	8/ <b>2-A</b>					Cli	ent	Sam	ple ID: La	ab Control	Sampl	e Du
Matrix: Solid									·	Prep Ty	-	
Analysis Batch: 39575										Prep E	Batch:	3961
			Spike	LCSD	LCSD					%Rec		RP
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Lim
Toluene			0.100	0.08743		mg/Kg		_	87	70 - 130	0	3
Ethylbenzene			0.100	0.08411		mg/Kg			84	70 - 130	4	3
m-Xylene & p-Xylene			0.200	0.1702		mg/Kg			85	70 - 130	7	3
o-Xylene			0.100	0.08443		mg/Kg			84	70 - 130	7	З
	LCSD LC	с <b>л</b>										
Surrogate	%Recovery Qu		Limits									
4-Bromofluorobenzene (Surr)	90	-	70 - 130									
1,4-Difluorobenzene (Surr)	117		70 - 130									
ethod: 8015B NM - Diesel	Range Orga	nics (DF	(GC)									
Lab Sample ID: MB 880-39298/1	- <b>A</b>								Client Sa	mple ID: M		
Matrix: Solid										Prep Ty	pe: To	tal/N
Analysis Batch: 39373										Prep E	Batch:	3929
	ME	3 MB										
Analyte		t Qualifier	RL		Unit		<u>D</u> .		repared	Analyzed		Dil Fa
Gasoline Range Organics GRO)-C6-C10	<50.0	) U	50.0	)	mg/l	<g< td=""><td></td><td>11/1</td><td>1/22 09:33</td><td>11/13/22 09</td><td>:25</td><td></td></g<>		11/1	1/22 09:33	11/13/22 09	:25	
Diesel Range Organics (Over C10-C28)	<50.0	) U	50.0	)	mg/l	<g< td=""><td></td><td>11/1</td><td>1/22 09:33</td><td>11/13/22 09</td><td>:25</td><td></td></g<>		11/1	1/22 09:33	11/13/22 09	:25	
Oll Range Organics (Over C28-C36)	<50.0	) U	50.0	)	mg/l	<g< td=""><td></td><td>11/1</td><td>1/22 09:33</td><td>11/13/22 09</td><td>:25</td><td></td></g<>		11/1	1/22 09:33	11/13/22 09	:25	
		3 <i>MB</i>										
Surrogate		Qualifier	Limits	-					repared	Analyzed		Dil Fa
1-Chlorooctane	10-		70 - 130						1/22 09:33	11/13/22 09		
o-Terphenyl	12	2	70 - 130					11/1	1/22 09:33	11/13/22 09	25	
Lab Sample ID: LCS 880-39298/	2-A						CI	lient	Sample	D: Lab Cor	ntrol S	ampl
Matrix: Solid										Prep Ty	pe: To	tal/N
Analysis Batch: 39373										Prep E		
			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics			1000	1126		mg/Kg		_	113	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1101		mg/Kg			110	70 - 130		
	LCS LC											
Surrogate	%Recovery Qu	alifier	Limits									
1-Chlorooctane	105		70 - 130									
o-Terphenyl	113		70 - 130									
Lab Sample ID: LCSD 880-3929	8/3-A					Cli	ent	Sam	ple ID: La	ab Control	Sampl	e Du
Matrix: Solid										Prep Ty	-	
Analysis Batch: 39373										Prep E		
			Spike	LCSD	LCSD					%Rec		RP
												-

Eurofins Midland

### Job ID: 880-21450-1 SDG: New Mexico

Client: Ensolum Project/Site: SEMU Eumont 117

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

Lab Sample ID: LCSD 880-39 Matrix: Solid	298/3-A						Cli	ient Sa	mple ID:	Lab Contro	ol Sampl Type: To	
Analysis Batch: 39373												
Analysis Batch. 59575										Fieh	Batch:	39290
	LCSD	LCSI	D									
Surrogate	%Recovery	Qual	ifier	Limits								
1-Chlorooctane	92			70 - 130								
o-Terphenyl	98			70 - 130								
Method: 300.0 - Anions, I	on Chromat	ogra	aphy									
_ Lab Sample ID: MB 880-3945	5/1-A								Client	Sample ID:	Method	Blank
Matrix: Solid										Prep	Type: Se	oluble
Analysis Batch: 39728												
		ΜВ	МВ									
Analyte	R	esult	Qualifier		RL	Unit		D	Prepared	Analyz	zed	Dil Fac
Chloride	<	5.00	U		5.00	mg/K	g		•	11/16/22		1
Lab Sample ID: LCS 880-394	55/2-4							Clie	nt Samol	e ID: Lab C	ontrol S	amnle
Matrix: Solid								01101	in oumpi		Type: So	
Analysis Batch: 39728										Trop	Type. O	
Analysis Datch. 55720				Spike	1.09	LCS				%Rec		
Analyte				Added		Qualifier	Unit	D	%Rec	Limits		
Chloride				250	269.5		mg/Kg		108	90 - 110		
-				200	203.0		iiig/itg		100	30 - 110		
- -												
Lab Sample ID: LCSD 880-39	455/3-A						Cli	ient Sa	mple ID:	Lab Contro	ol Sampl	e Dup
Lab Sample ID: LCSD 880-39 Matrix: Solid	9455/3-A						Cli	ient Sa	mple ID:		ol Sampl Type: Se	
	)455/3-A						Cli	ient Sa	mple ID:			
Matrix: Solid	)455/3-A			Spike	LCSD	LCSD	Cli	ient Sa	mple ID:			oluble
Matrix: Solid	9455/3-A			Spike Added		LCSD	Cli Unit	ient Sa D		Prep		oluble RPD
Matrix: Solid Analysis Batch: 39728				•		Qualifier				Prep %Rec	Type: So	RPD Limit
Matrix: Solid Analysis Batch: 39728 Analyte				Added	Result	Qualifier	Unit		%Rec	Prep %Rec Limits	RPD       2	RPE Limi
Matrix: Solid Analysis Batch: 39728 Analyte Chloride				Added	Result	Qualifier	Unit		%Rec	Prep %Rec Limits 90 - 110 Client Sa	Type: So <u>RPD</u> 2 mple ID:	RPE Limi 20 SS01
Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1 Matrix: Solid				Added	Result	Qualifier	Unit		%Rec	Prep %Rec Limits 90 - 110 Client Sa	RPD       2	RPE Limi 20 SS01
Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1		Sam		Added	<b>Resul</b> 273.7	Qualifier	Unit		%Rec	Prep %Rec Limits 90 - 110 Client Sa	Type: So <u>RPD</u> 2 mple ID:	RPD Limit 20 SS01
Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1 Matrix: Solid	 MS			Added 250	Result 273.7 MS	Qualifier	Unit		<b>%Rec</b> 109	Prep %Rec Limits 90 - 110 Client Sat Prep	Type: So <u>RPD</u> 2 mple ID:	RPD Limit 20 SS01
Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1 Matrix: Solid Analysis Batch: 39728	MS Sample			Added 250 Spike	Result 273.7 MS	Qualifier MS Qualifier	– <mark>Unit</mark> mg/Kg	<u>D</u>	<b>%Rec</b> 109	Prep %Rec Limits 90 - 110 Client Sa Prep %Rec	Type: So <u>RPD</u> 2 mple ID:	RPD Limit 20 SS01
Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1 Matrix: Solid Analysis Batch: 39728 Analyte	MS Sample <u>Result</u> 590			Added 250 Spike Added	Result 273.7 MS Result	Qualifier MS Qualifier	Unit mg/Kg	<u>D</u>	%Rec 109	Prep %Rec Limits 90 - 110 Client Sa Prep %Rec Limits	Type: So <u>RPD</u> 2 mple ID: Type: So	RPD Limit 20 SS01 Dluble
Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1 Matrix: Solid Analysis Batch: 39728 Analyte Chloride	MS Sample <u>Result</u> 590			Added 250 Spike Added	Result 273.7 MS Result	Qualifier MS Qualifier	Unit mg/Kg	<u>D</u>	%Rec 109	Prep %Rec Limits 90 - 110 Client Sa Prep %Rec Limits 90 - 110 Client Sa	Type: So <u>RPD</u> 2 mple ID: Type: So mple ID:	SS01
Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1 Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1 Matrix: Solid	MS Sample <u>Result</u> 590			Added 250 Spike Added	Result 273.7 MS Result	Qualifier MS Qualifier	Unit mg/Kg	<u>D</u>	%Rec 109	Prep %Rec Limits 90 - 110 Client Sa Prep %Rec Limits 90 - 110 Client Sa	Type: So <u>RPD</u> 2 mple ID: Type: So	RPD Limit 20 SS01 oluble SS01
Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1 Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1	MS Sample <u>Result</u> 590	Qual	ifier	Added 250 Spike Added	Result 273.7 MS Result 850.4	Qualifier MS Qualifier	Unit mg/Kg	<u>D</u>	%Rec 109	Prep %Rec Limits 90 - 110 Client Sa Prep %Rec Limits 90 - 110 Client Sa	Type: So <u>RPD</u> 2 mple ID: Type: So mple ID:	SS01
Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1 Matrix: Solid Analysis Batch: 39728 Analyte Chloride Lab Sample ID: 880-21450-1 Matrix: Solid	MS Sample <u>Result</u> 590 MSD	Qual	ifier	Added 250 Spike Added 249	Result 273.7 MS Result 850.4	Qualifier MS Qualifier	Unit mg/Kg	<u>D</u>	<ul> <li>%Rec</li> <li>109</li> <li>%Rec</li> <li>105</li> </ul>	Prep %Rec Limits 90 - 110 Client Sat Prep %Rec Limits 90 - 110 Client Sat Prep	Type: So <u>RPD</u> 2 mple ID: Type: So mple ID:	SS01

### **QC** Association Summary

Client: Ensolum Project/Site: SEMU Eumont 117

Page 216 of 244

Job ID: 880-21450-1 SDG: New Mexico

### **GC VOA**

### Prep Batch: 39499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
/IB 880-39499/5-A	Method Blank	Total/NA	Solid	5035	
nalysis Batch: 39575					
ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batc
380-21450-1	SS01	Total/NA	Solid	8021B	3961
380-21450-2	SS02	Total/NA	Solid	8021B	3961
MB 880-39499/5-A	Method Blank	Total/NA	Solid	8021B	3949
MB 880-39618/5-A	Method Blank	Total/NA	Solid	8021B	3961
_CS 880-39618/1-A	Lab Control Sample	Total/NA	Solid	8021B	3961
_CSD 880-39618/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3961
rep Batch: 39618 _ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Bate
380-21450-1	SS01	Total/NA	Solid	5035	
380-21450-2	SS02	Total/NA	Solid	5035	
MB 880-39618/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39618/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39618/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
nalysis Batch: 39701					
ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Bate
380-21450-1	SS01	Total/NA	Solid	Total BTEX	
880-21450-2	SS02	Total/NA	Solid	Total BTEX	

### GC Semi VOA

#### Prep Batch: 39298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21450-1	SS01	Total/NA	Solid	8015NM Prep	
880-21450-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-39298/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-39298/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-39298/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 39373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21450-1	SS01	Total/NA	Solid	8015B NM	39298
880-21450-2	SS02	Total/NA	Solid	8015B NM	39298
MB 880-39298/1-A	Method Blank	Total/NA	Solid	8015B NM	39298
LCS 880-39298/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	39298
LCSD 880-39298/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	39298

#### Analysis Batch: 39494

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-21450-1	SS01	Total/NA	Solid	8015 NM	
880-21450-2	SS02	Total/NA	Solid	8015 NM	

HPLC/IC

#### Leach Batch: 39455

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-21450-1	SS01	Soluble	Solid	DI Leach	

Eurofins Midland
# **QC Association Summary**

Client: Ensolum Project/Site: SEMU Eumont 117

## HPLC/IC (Continued)

#### Leach Batch: 39455 (Continued)

80-21450-2	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
00-21400-2	SS02	Soluble	Solid	DI Leach	
MB 880-39455/1-A	Method Blank	Soluble	Solid	DI Leach	
_CS 880-39455/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
_CSD 880-39455/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-21450-1 MS	SS01	Soluble	Solid	DI Leach	
880-21450-1 MSD	SS01	Soluble	Solid	DI Leach	
nalysis Batch: 39728					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21450-1	SS01	Soluble	Solid	300.0	39455
880-21450-2	SS02	Soluble	Solid	300.0	39455
MB 880-39455/1-A	Method Blank	Soluble	Solid	300.0	39455
LCS 880-39455/2-A	Lab Control Sample	Soluble	Solid	300.0	39455
LCSD 880-39455/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	39455
880-21450-1 MS	SS01	Soluble	Solid	300.0	39455
880-21450-1 MSD	SS01	Soluble	Solid	300.0	39455

#### Analysis Batch: 39728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21450-1	SS01	Soluble	Solid	300.0	39455
880-21450-2	SS02	Soluble	Solid	300.0	39455
MB 880-39455/1-A	Method Blank	Soluble	Solid	300.0	39455
_CS 880-39455/2-A	Lab Control Sample	Soluble	Solid	300.0	39455
_CSD 880-39455/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	39455
380-21450-1 MS	SS01	Soluble	Solid	300.0	39455
880-21450-1 MSD	SS01	Soluble	Solid	300.0	39455

#### Job ID: 880-21450-1 SDG: New Mexico

Job ID: 880-21450-1 SDG: New Mexico

### Lab Sample ID: 880-21450-1 Matrix: Solid

**Client Sample ID: SS01** Date Collected: 11/08/22 11:30 Date Received: 11/10/22 15:57

Project/Site: SEMU Eumont 117

Client: Ensolum

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			39618	MNR	EET MID	11/15/22 13:19
Total/NA	Analysis	8021B		100	39575	MNR	EET MID	11/16/22 04:36
Total/NA	Analysis	Total BTEX		1	39701	SM	EET MID	11/16/22 10:36
Total/NA	Analysis	8015 NM		1	39494	AJ	EET MID	11/14/22 13:38
Total/NA	Prep	8015NM Prep			39298	DM	EET MID	11/11/22 09:33
Total/NA	Analysis	8015B NM		5	39373	AJ	EET MID	11/13/22 13:59
Soluble	Leach	DI Leach			39455	KS	EET MID	11/14/22 11:51
Soluble	Analysis	300.0		1	39728	СН	EET MID	11/16/22 17:14

## **Client Sample ID: SS02**

Date Collected: 11/08/22 11:33 Date Received: 11/10/22 15:57

Lab Sample ID: 880-21450-2 Matrix: Solid

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			39618	MNR	EET MID	11/15/22 13:19
Total/NA	Analysis	8021B		50	39575	MNR	EET MID	11/16/22 04:57
Total/NA	Analysis	Total BTEX		1	39701	SM	EET MID	11/16/22 10:36
Total/NA	Analysis	8015 NM		1	39494	AJ	EET MID	11/14/22 13:38
Total/NA	Prep	8015NM Prep			39298	DM	EET MID	11/11/22 09:33
Total/NA	Analysis	8015B NM		1	39373	AJ	EET MID	11/13/22 13:17
Soluble	Leach	DI Leach			39455	KS	EET MID	11/14/22 11:51
Soluble	Analysis	300.0		1	39728	СН	EET MID	11/16/22 17:36

#### Laboratory References:

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

5 6

9

		Accreditation/Co	ertification Summary		
Client: Ensolum Project/Site: SEMU Eui	mont 117			Job ID: 880-21450-1 SDG: New Mexico	2
Laboratory: Eurofi		ry were covered under each accr	reditation/certification below		
Authority		Program	Identification Number	Expiration Date	
Texas		NELAP	T104704400-22-24	06-30-23	
The following analytes a the agency does not off		ort, but the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for which	5
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					13

Eurofins Midland

.

## **Method Summary**

Client: Ensolum Project/Site: SEMU Eumont 117 Job ID: 880-21450-1 SDG: New Mexico

Nethod	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
lotal BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
3015B 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
3015NM Prep	Microextraction	SW846	EET MID
OI 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 Midland** 

## **Sample Summary**

Client: Ensolum Project/Site: SEMU Eumont 117 Job ID: 880-21450-1 SDG: New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-21450-1	SS01	Solid	11/08/22 11:30	11/10/22 15:57	0.5
880-21450-2	SS02	Solid	11/08/22 11:33	11/10/22 15:57	0.5

5

12 13 14

**Seurofins** 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

Work Order No: 21450

Job Number: 880-21450-1 SDG Number: New Mexico

List Source: Eurofins Midland

### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 21450 List Number: 1 Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
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	

Received by OCD: 2/2/2023 9:39:03 AM

# **Eurofins Midland**

**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

RAMER

Generated 11/17/2022 1:13:26 PM

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

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



# APPENDIX D

Final C-141

•

District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141

Page 226cof 244

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

)

Incident ID	NAPP2231946665
District RP	
Facility ID	
Application ID	

# **Release Notification**

# **Responsible Party**

Responsible Party: Maverick Permian, LLC	OGRID: 331199
Contact Name: Bryce Wagoner	Contact Telephone: 928-241-1862
Contact email: Bryce.Wagoner@mavresources.com	Incident # (assigned by OCD) NAPP2231946665
Contact mailing address: 1410 NW County Road Hobbs, NM 88240	· ·

## **Location of Release Source**

Latitude 32.5559572\_

Longitude -103.2069571

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: SEMU Eumont #117	Site Type
Date Release Discovered November 5, 2022	API# (if applicable) 30-025-26714

Unit Letter	Section	Township	Range	County
L	24	20S	37E	Lea

Surface Owner: State Federal Tribal Private (Name: \_\_\_\_\_

# Nature and Volume of Release

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

Crude Oil	Volume Released (bbls) 1.29 bbls	Volume Recovered (bbls)
Produced Water	Volume Released (bbls) 3.02 bbls	Volume Recovered (bbls) 0 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ⊠ No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a flowline leak resulting in a non-reportable release. The release occurred off pad. The source of the release has been stopped and the impacted area has been secured. The C-141 is being used to document and close out the remediation process. Initial response and removal of saturated soil from the release area has been completed.

Page 2

## Oil Conservation Division

Incident ID	NAPP2231946665
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
🗌 Yes 🖾 No	
If YES, was immediate ne	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

# **Initial Response**

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

 $\square$  The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name:Bryce Wagoner	Title:Permian HSE Specialist II
Signature:	Date:11/15/2022
email:Bryce.Wagoner@mavresources.com	Telephone:928-241-1862
OCD Only	
Received by: Jocelyn Harimon	Date:11/15/2022

	Pooled Fluids on the Surface									
	Length (ft.)	Width (ft.)	Depth (in)	# of Boundaries *edges of pool where depth is 0. don't count shared boundaries	Oil-Water Ratio (%)	Pooled Area (ft <sup>2</sup> )	Estimated Average Depth (ft.)	Pooled Volume (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A					0.01	0.0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle B					0.01	0.0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle C						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle D						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Total Volume (bbls): 0.00 0.00 0.00							0.00		

Subsurface Fluids										
	Length (ft.)	Width (ft.)	Depth (in.)	Saturation (%) *10% in consolidated sediments after rain to 50% in sand with no precipitation	Oil-Water Ratio (%)	Area (ft²)	Volume (bbl.)	Estimated Volume in Subsurface (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A	55.0	11.0	6.0	0.1	0.30	605.0	53.8	4.3	1.29	3.0
Rectangle B				0.1	0.01	0.0	0.0	0.0	0.00	0.0
Rectangle C				0.1	0.01	0.0	0.0	0.0	0.00	0.0
Rectangle D				0.1	0.01	0.0	0.0	0.0	0.00	0.0
Rectangle E				0.1	0.01	0.0	0.0	0.0	0.00	0.0
Rectangle F						0.0	0.0	0.0	0.00	0.0
Rectangle G	1					0.0	0.0	0.0	0.00	0.0
Rectangle H	1					0.0	0.0	0.0	0.00	0.0
Rectangle I	1					0.0	0.0	0.0	0.00	0.0
Rectangle J	1					0.0	0.0	0.0	0.00	0.0
	•			•		Total Vol	ume (bbls):	4.31	1.29	3.02

TOTAL RELEASE VOLUME (bbls): 4.3

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

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

District III

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

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

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

CONDITIONS

Operator:	OGRID:
Maverick Permian LLC	331199
1111 Bagby Street Suite 1600	Action Number:
Houston, TX 77002	158976
	Action Type:
	[C-141] Release Corrective Action (C-141)
CONDITIONS	

Created By Condition jharimon None

DITIONS

Page1229eof 244

Action 158976

Condition Date 11/15/2022

CON

Oil Conservation Division

	Page 230 of 24	4
cident ID	NAPP2231946665	
strict RP		
cility ID		

Site Assessment/Characterization

In

D

Application ID

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data

Page 3

- Data table of soil contaminant concentration data
- $\square$  Depth to water determination
- Determination of water sources and significant watercourses within <sup>1</sup>/<sub>2</sub>-mile of the lateral extents of the release
- $\boxtimes$  Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

Received by OCD: 2/2/2	2023 9:39:03 AM State of New Mexico		Page 231 of 244
		Incident ID	NAPP2231946665
Page 4	Oil Conservation Division	District RP	
		Facility ID	
		Application ID	
regulations all operators public health or the envi failed to adequately inve addition, OCD acceptan and/or regulations. Printed Name:Bry Signature:	Date: _2/3	perform corrective actions for relevant relieve the operator of liability shuter, surface water, human health	eases which may endanger ould their operations have o or the environment. In deral, state, or local laws
OCD Only Received by:JC	ocelyn Harimon Dat	e:_02/02/2023	

Page 6

Oil Conservation Division

Incident ID	NAPP2231946665
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 items must be included in the closure report. A scaled site and sampling diagram as described in 19.15.29.11 NMAC Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection) Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling) Description of remediation activities I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete. Printed Name: Bryce Wagoner Title: HSE Specialist Date: 2/3/2023 Signature: Telephone: \_\_\_\_928-241-1862\_\_\_\_\_ email: \_\_bryce.wagoner@mavresources.com\_\_\_\_\_ **OCD Only** Jocelyn Harimon Date: 02/02/2023 Received by: \_\_\_\_ Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations. Jennifer Nobui Date: 02/20/2023 Closure Approved by: \_\_\_\_ Printed Name: \_\_\_Jennifer Nobui Title: Environmental Specialist A



# APPENDIX E

**NMOCD** Notifications

Released to Imaging: 2/20/2023 2:06:44 PM

From:	Morgan, Crisha A
То:	Kalei Jennings
Cc:	Hadlie Green
Subject:	Re: [EXTERNAL] Maverick Permian - BLM Access Request - SEMU Eumont #117 / NAPP2231946665
Date:	Wednesday, November 16, 2022 3:43:38 PM
Attachments:	image001.png
	image002.png
	image003.png
	image004.png
	Outlook-fnuef3qv.png
	Seed Mixture 2 LPC.doc

#### [ \*\*EXTERNAL EMAIL\*\*]

My Environmental Impact Review is as follows:

Private Surface/BLM Minerals

An archaeology survey is going to be required for this release before any work can begin in the pasture.

No cave/karst

This release falls within Dunes Sagebrush Lizard and Lesser Prairie-Chicken Habitats

No hydrology stipulations

This location will require BLM Seed Mixture #2 for LPC. I have attached a copy for your records

Please do not begin work in the pasture until the Arch survey is completed. Once you recieve the survey back, please send it over for me to review.

Thank you,

#### Crisha A. Morgan |Certified - Environmental Protection Specialist | Program

Officer COR | Spills Coordinator | Orphaned Well POC Lead Bureau of Land Management | Carlsbad Field Office 620 E. Greene Street Carlsbad, NM 88220 Cell 575-200-8648 | Office 575-234-5987 |camorgan@blm.gov



WARNING: This document is FOR OFFICIAL USE ONLY (FOUO). It contains information that may be exempt from public release under the Freedom of Information Act (5.U.S.C. 552). It is to be controlled, stored, handled, transmitted, distributed, and disposed of in accordance with Department of **Interior** (DOI) policy relating to FOUO information and is not to be released to the public or other personnel who do not have need-to-know without prior approval of an authorized DOI official. **FOR OFFICIAL USE ONLY** 

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Tuesday, November 15, 2022 3:24 PM
To: Morgan, Crisha A <camorgan@blm.gov>
Cc: Hadlie Green <hgreen@ensolum.com>
Subject: [EXTERNAL] Maverick Permian - BLM Access Request - SEMU Eumont #117 /

NAPP2231946665

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hi Crisha,

Please see the attached documents requesting access to BLM land to remediate soil impacted by a release of produced water and crude oil at SEMU Eumont #117 / NAPP2231946665 located off pad at 32.5559572, -103.2069571.

The soil will be excavated and transported to a licensed disposal facility. All remediation activities will comply with NMOCD spill rules (19.15.29 NMAC). Equipment, materials, crew, and environmental oversight will be present on BLM land. Please see attached documents for review:

- Sundry Form 3160
- Kmz to include proposed land access area

Please let me know if you have any questions.

Thank you,



Kalei Jennings Senior Scientist 817-683-2503 Ensolum, LLC

From:	Enviro, OCD, EMNRD
To:	Kalei Jennings
Cc:	Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject:	RE: [EXTERNAL] Maverick- Sampling Notification (Week of 01/02/2023)
Date:	Friday, December 30, 2022 11:40:40 AM
Attachments:	image005.jpg image006.png image007.png image008.png image009.png

### [ \*\*EXTERNAL EMAIL\*\*]

Good morning Kalei,

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.

Thank you, Jocelyn

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: Kalei Jennings <kjennings@ensolum.com>
Sent: Friday, December 30, 2022 10:25 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Hadlie Green <hgreen@ensolum.com>; Josh Adams <jadams@ensolum.com>
Subject: [EXTERNAL] Maverick- Sampling Notification (Week of 01/02/2023)

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

All,

Maverick Natural Resources (Maverick) plans to complete final sampling activities at the following sites the week of January 2, 2023.

• Ruby Federal/ NAPP2231448981

- SEMU Eumont 117/ NAPP2231946665
- Oxy State F-1 / NAPP2235375291
- Jalmat 170 / NAPP2233946698
- Baish B Battery / NAPP2235372941

Thank you,



Kalei Jennings Senior Scientist 817-683-2503 Ensolum, LLC

From:	Enviro, OCD, EMNRD
To:	Kalei Jennings
Cc:	Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject:	RE: [EXTERNAL] Maverick- Sampling Notification (Week of 12/12/2022)
Date:	Thursday, December 8, 2022 9:21:58 AM
Attachments:	image005.jpg image006.png image007.png image008.png image009.png

### [ \*\*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 | Jocelyn.Harimon@emnrd.nm.gov http:// www.emnrd.nm.gov



From: Kalei Jennings <kjennings@ensolum.com>
Sent: Wednesday, December 7, 2022 4:46 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick- Sampling Notification (Week of 12/12/2022)

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

All,

Maverick Natural Resources (Maverick) plans to complete final sampling activities at the following sites the week of December 12, 2022.

- Jalmat 170/ NAPP2233946698
- SEMU Eumont 117 / NAPP2231946665
- EVGSAU 2418-001 / NAPP2231954757

Thank you,

L



Kalei Jennings Senior Scientist 817-683-2503 Ensolum, LLC

From:	Enviro, OCD, EMNRD
То:	Kalei Jennings
Cc:	Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject:	RE: [EXTERNAL] Maverick- Sampling Notification (Week of 12/19/2022)
Date:	Wednesday, December 14, 2022 4:43:00 PM
Attachments:	image005.jpg image006.png
	image007.png
	image008.png
	image009.png

### [ \*\*EXTERNAL EMAIL\*\*]

Good afternoon Kalei,

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 | Jocelyn.Harimon@emnrd.nm.gov http:// www.emnrd.nm.gov



From: Kalei Jennings <kjennings@ensolum.com>
Sent: Wednesday, December 14, 2022 3:21 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick- Sampling Notification (Week of 12/19/2022)

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

All,

Maverick Natural Resources (Maverick) plans to complete final sampling activities at the following sites the week of December 19, 2022.

- Ruby Federal/ NAPP2231448981
- SEMU Eumont 117/ NAPP2231946665
- State F TG/ NAPP2233947938

Thank you,



Kalei Jennings Senior Scientist 817-683-2503 Ensolum, LLC

From:	Enviro, OCD, EMNRD
То:	Kalei Jennings
Cc:	Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject:	RE: [EXTERNAL] Maverick- Sampling Notification (Week of 12/26/2022)
Date:	Thursday, December 22, 2022 2:16:00 PM
Attachments:	image005.jpg image006.png image007.png image008.png image009.png

### [ \*\*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 | Jocelyn.Harimon@emnrd.nm.gov http:// www.emnrd.nm.gov



From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, December 22, 2022 12:47 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Hadlie Green <hgreen@ensolum.com>; Josh Adams <jadams@ensolum.com>
Subject: [EXTERNAL] Maverick- Sampling Notification (Week of 12/26/2022)

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

All,

Maverick Natural Resources (Maverick) plans to complete final sampling activities at the following sites the week of December 26, 2022.

- Ruby Federal/ NAPP2231448981
- SEMU Eumont 117/ NAPP2231946665
- Oxy State F-1 / NAPP2235375291

Thank you,



Kalei Jennings Senior Scientist 817-683-2503 Ensolum, LLC

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

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

District III

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

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

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

CONDITIONS

Operator:	OGRID:
Maverick Permian LLC	331199
1111 Bagby Street Suite 1600	Action Number:
Houston, TX 77002	181945
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	2/20/2023

Page 244 of 244

Action 181945