



April 28, 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
Gold Coast 26 Federal 001H
Incident Number NAPP2234636400
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this *Closure Request* to document delineation, excavation, and soil sampling activities performed at the Gold Coast 26 Federal 001H (Site). The purpose of the delineation, excavation, and soil sampling activities was to address impacts to soil resulting from a water transfer line release into the surrounding pasture. Based on the excavation activities and laboratory analytical results from the soil sampling events, COG is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2234636400.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 35, Township 24 South, Range 32 East, in Lea County, New Mexico (32.1813°, -103.6385°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On December 2, 2022, internal corrosion of a surface water transfer line resulted in the release of approximately 2.43 barrels (bbls) of produced water onto the surrounding pasture area. No free-standing fluids were recovered. COG reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on December 12, 2022. The release was assigned Incident Number NAPP2234636400.

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.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data and regional depth to water determination. The

closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 321005103402301 located approximately 2.05 miles southwest of the Site. The groundwater well has a reported depth to groundwater of 289 feet bgs and a total depth of 367 feet bgs. 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 4.3 miles northeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and less than 300 feet from an occupied residence, school, hospital, institution, or church. 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). The Site is located less than 300 feet from a wetland. 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): 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On December 20, 2022, Ensolum personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Six assessment soil samples (SS01 through SS06) were collected within and around the release extent at an approximate depth of 0.2 feet bgs to confirm 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® chloride QuanTab® test strips. The release extent and 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.

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-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for soil samples collected around the release extent (SS03 through SS06), indicated all COC concentrations were compliant with the Site Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for soil samples collected within the release extent (SS01 and SS02) indicated chloride concentrations exceeded the Site Closure Criteria. Based on the laboratory analytical results, impacted soil was identified within the release extent and excavation activities were warranted. 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

On February 2, 2023, Ensolum personnel were at the Site to oversee excavation activities based on surface staining in the pasture release area and laboratory analytical results exceeding the Site Closure Criteria in assessment samples SS01 and SS02. 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 back-hoe and transport vehicles. To direct excavation activities, soil was field screened for VOCs and chloride as described above. The excavation was completed to a depth of 4 feet bgs. Photographic documentation is included in Appendix B.

Following removal of impacted 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 sample FS01 was collected from the floor of the excavation at a depth of 4 feet bgs. Composite soil sample SW01 was collected from the sidewall 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.

Laboratory analytical results for excavation sidewall sample SW01 indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for excavation floor soil sample FS01 indicated chloride concentrations exceeded the Site Closure Criteria and additional excavation was required. On February 17, 2023, Ensolum personnel were onsite to oversee the removal of additional soil in the vicinity of floor sample FS01. Subsequent sample FS01A was collected from the floor of the excavation at a depth of 4.5 feet bgs. Composite soil samples SW02 and SW03 were collected from the sidewalls of the excavation at depths ranging from ground surface to 4.5 feet bgs. The excavation extent and excavation soil sample locations are presented on Figure 3.

The excavation measured approximately 185 square feet in aerial extent. A total of approximately 31 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. The excavation was secured with fencing once the excavation was complete.

Laboratory analytical results for all final excavation samples (FS01A and SW01 through SW03) indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the December 2, 2022, release of produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria. Based on the soil sample analytical results, no further remediation was required. The excavation will be backfilled, and the disturbed pasture area will be re-seeded with an approved BLM seed mixture.



Excavation of impacted soil has mitigated impacts at this Site. COG believes the remedial actions completed are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number NAPP2234636400. The Final C-141 is included in Appendix E.

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



Aimee Cole
Senior Managing Scientist

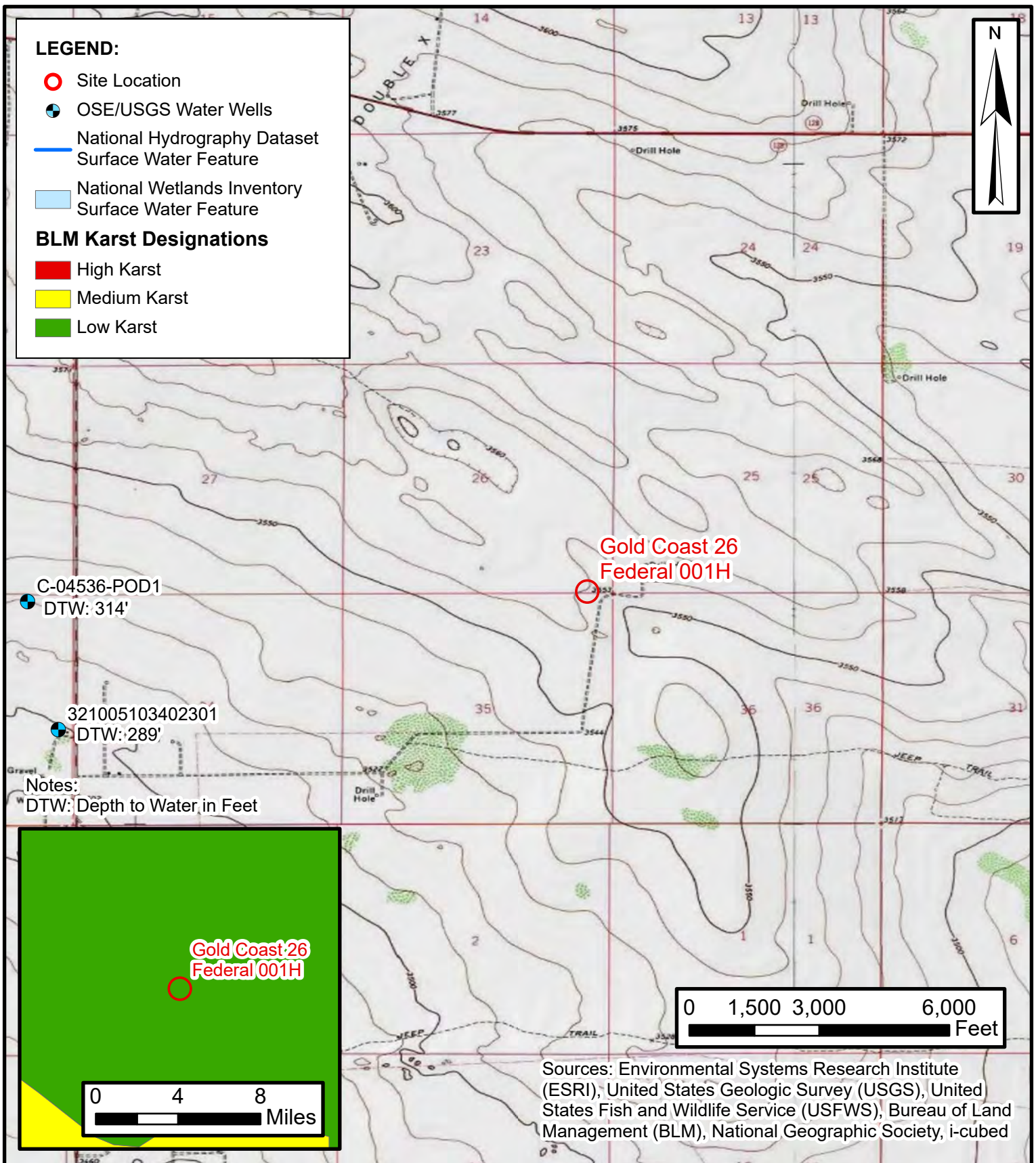
cc: Jacob Laird, ConocoPhillips Company
Bureau of Land Management

Appendices:

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



FIGURES



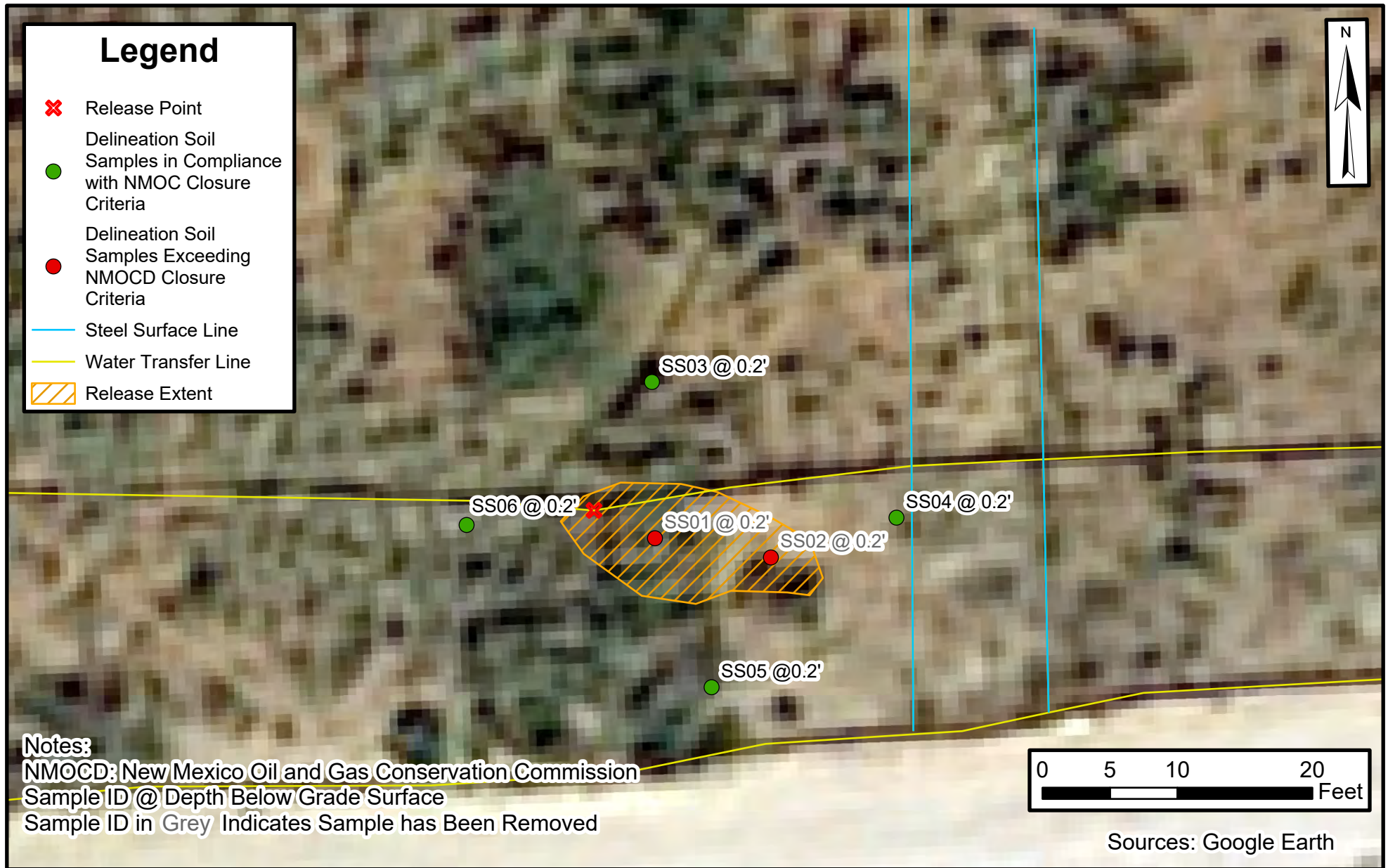
Sources: Environmental Systems Research Institute (ESRI), United States Geologic Survey (USGS), United States Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), National Geographic Society, i-cubed



SITE RECEPTOR MAP

COG Operating, LLC
 Gold Coast 26 Federal 001H
 Incident Number: NAPP2234636400
 Unit A, Sec 35, T24S, R32E
 Lea County, New Mexico

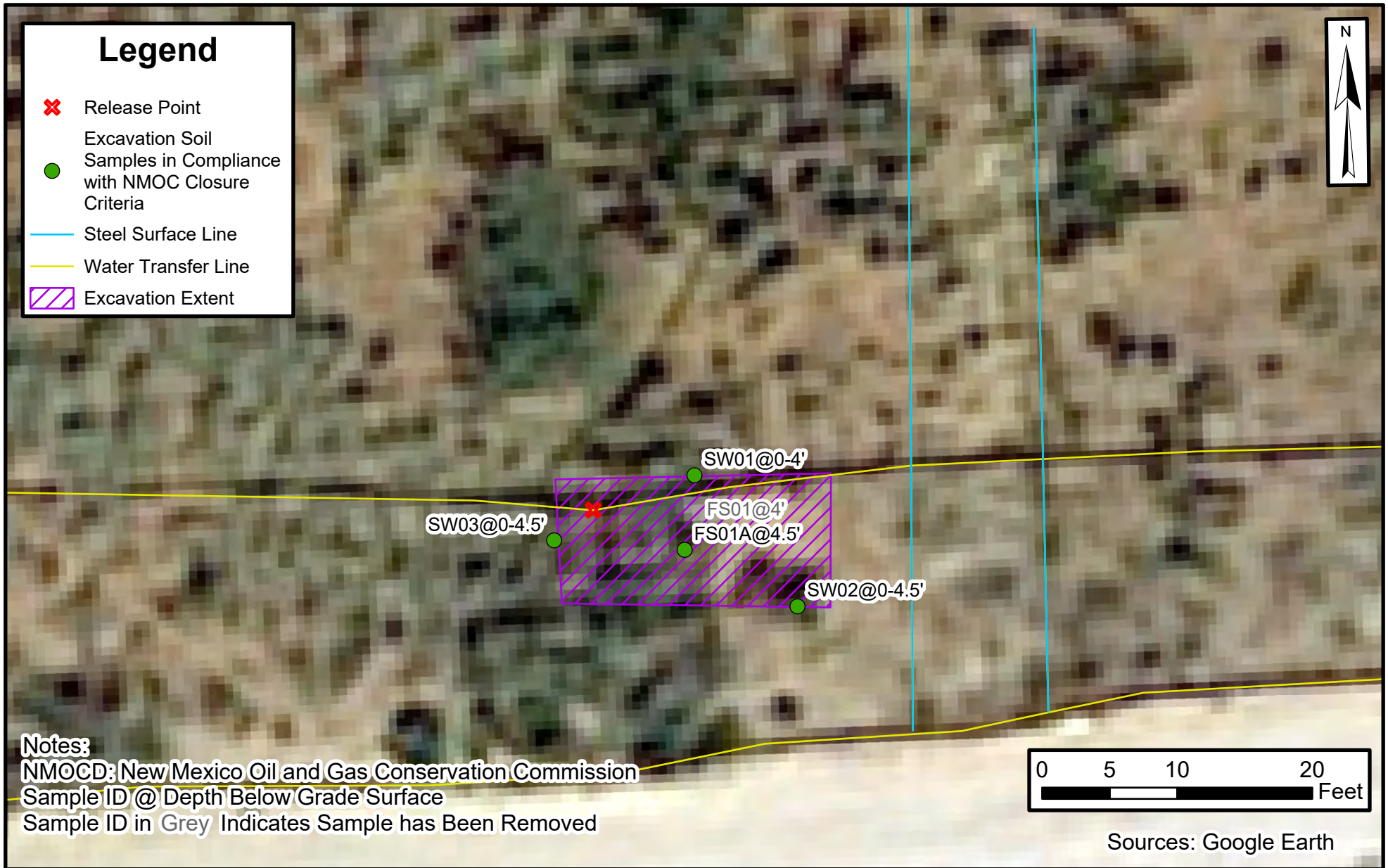
FIGURE
1



Assessment Soil Sample Locations

COG Operating, LLC
 Gold Coast 26 Federal 001H
 Incident Number: NAPP2234636400
 Unit A, Sec 35, T24S, R32E
 Lea County, New Mexico

**FIGURE
 2**



Excavation Soil Sample Locations
 COG Operating, LLC
 Gold Coast 26 Federal 001H
 Incident Number: NAPP2234636400
 Unit A, Sec 35, T24S, R32E
 Lea County, New Mexico

**FIGURE
3**



TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Gold Coast 26 Federal 001H
 COG Operating, LLC
 Lea County, New Mexico

Sample Designation	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)
NMOCOD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Assessment Soil Samples										
SS01	12/20/2022	0.2	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	6,980
SS02	12/20/2022	0.2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	5,340
SS03	12/20/2022	0.2	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	259
SS04	12/20/2022	0.2	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	6.53
SS05	12/20/2022	0.2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	<5.02
SS06	12/20/2022	0.2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	<5.01
Floor Excavation Soil Samples										
FS01	02/02/2023	4	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	691
FS01A	02/17/2023	4.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	<5.02
Sidewall Excavation Soil Samples										
SW01	02/02/2023	0 - 4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	<4.95
SW02	02/17/2023	0 - 4.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	<5.02
SW03	02/17/2023	0 - 4.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	<4.99

Notes:

- bgs: below ground surface*
- mg/kg: milligrams per kilogram*
- NE: not established*
- NMAC: New Mexico Administrative Code*
- NMOCOD: New Mexico Oil Conservation Division*
- BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes*
- GRO: Gasoline Range Organics*
- DRO: Diesel Range Organics*
- ORO: Oil Range Organics*
- TPH: Total Petroleum Hydrocarbon*
- Concentrations in **bold** exceed the NMOCOD Table I Closure Criteria or reclamation requirement where applicable.
- Grey text represents samples that have been excavated*



APPENDIX A

Referenced Well Records



New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tw	Rng	X	Y
20E37	C 04536 POD1	1	2	2	33	24S	32E	625019	3561244

x

Driller License: 1706 **Driller Company:** ELITE DRILLERS CORPORATION

Driller Name: BRYCE WALLACE

Drill Start Date: 06/09/2021 **Drill Finish Date:** 06/10/2021 **Plug Date:**

Log File Date: 06/21/2021 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 4 GPM

Casing Size: 4.30 **Depth Well:** 500 feet **Depth Water:** 314 feet

x

Water Bearing Stratifications:	Top	Bottom	Description
	235	480	Sandstone/Gravel/Conglomerate

x

Casing Perforations:	Top	Bottom
	300	500

x

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

1/4/23 11:50 AM

POINT OF DIVERSION SUMMARY



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Geographic Area:

Click to hide News Bulletins

- See the [Water Data for the Nation Blog](#) for the latest news and updates.

Groundwater levels for the Nation

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

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 321005103402301

Minimum number of levels = 1

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

USGS 321005103402301 24S.32E.33.42241

Lea County, New Mexico

Latitude 32°10'21.6", Longitude 103°40'18.9" NAD83

Land-surface elevation 3,499.00 feet above NGVD29

The depth of the well is 367 feet below land surface.

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
------	------	-------------------------------------	---------------------	--------------------------------------	---	---------------------------	-------------	----------------------------	-----------------------	----------------------------	----------------------------------

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
1959-02-18			D	62610	3185.60	NGVD29	1	Z			A
1959-02-18			D	62611	3187.32	NAVD88	1	Z			A
1959-02-18			D	72019	313.40		1	Z			A
1981-06-12			D	62610	3194.60	NGVD29	1	Z			A
1981-06-12			D	62611	3196.32	NAVD88	1	Z			A
1981-06-12			D	72019	304.40		1	Z			A
1986-03-11			D	62610	3193.79	NGVD29	1	Z			A
1986-03-11			D	62611	3195.51	NAVD88	1	Z			A
1986-03-11			D	72019	305.21		1	Z			A
1991-05-29			D	62610	3211.55	NGVD29	1	Z			A
1991-05-29			D	62611	3213.27	NAVD88	1	Z			A
1991-05-29			D	72019	287.45		1	Z			A
1996-03-14			D	62610	3213.60	NGVD29	1	S			A
1996-03-14			D	62611	3215.32	NAVD88	1	S			A
1996-03-14			D	72019	285.40		1	S			A
2001-02-27			D	62610	3210.32	NGVD29	1	S			A
2001-02-27			D	62611	3212.04	NAVD88	1	S			A
2001-02-27			D	72019	288.68		1	S			A
2013-01-17	16:30 UTC		m	62610	3209.31	NGVD29	1	S	USGS	S	A
2013-01-17	16:30 UTC		m	62611	3211.03	NAVD88	1	S	USGS	S	A
2013-01-17	16:30 UTC		m	72019	289.69		1	S	USGS	S	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface

Section	Code	Description
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

[Questions about sites/data?](#)

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Title: Groundwater for USA: Water Levels

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



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

Page Last Modified: 2023-01-04 13:45:08 EST

0.33 0.27 nadww01



APPENDIX B
Photographic Log



Photographic Log
COG Operating, LLC
Gold Coast 26 Federal 1H
Lea County, New Mexico

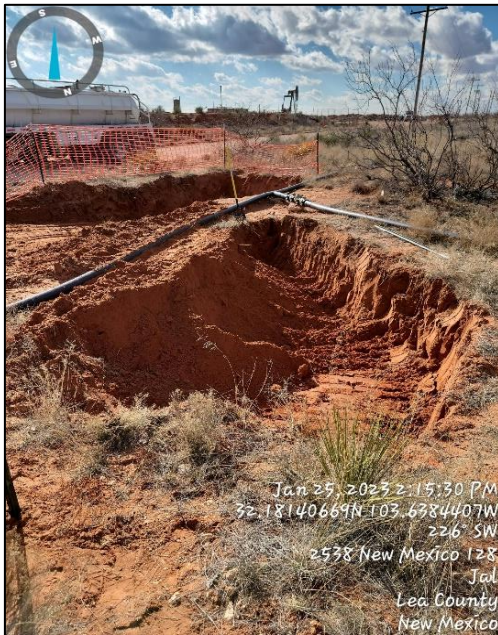


Dec 20, 2022 9:12:48 AM
32.18135416N 103.63848761W
259' W
Unnamed Road
Jal
Lea County
New Mexico

Photograph: 1 Date: 12/20/2022
Description: Initial release extent assessment
View: Southwest



Photograph: 2 Date: 1/6/2023
Description: Excavation Activities
View: Southwest



Jan 25, 2023 2:15:30 PM
32.18140669N 103.6384407W
226' SW
2538 New Mexico 128
Jal
Lea County
New Mexico

Photograph: 3 Date: 1/25/2023
Description: Excavation activities
View: Southwest



Feb 17, 2023 12:25:44 PM
32.18132098N 103.63851962W
279' W
2538 New Mexico 128
Jal
Lea County
New Mexico

Photograph: 4 Date: 2/17/2023
Description: Excavation Activities
View: Northwest



APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
 Ensolum
 601 N. Marienfeld St.
 Suite 400
 Midland, Texas 79701

Generated 12/30/2022 12:38:28 PM

JOB DESCRIPTION

Gold Coast Federal 1H
 SDG NUMBER 32.181380,-103.638525

JOB NUMBER

890-3687-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220

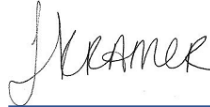


Eurofins Carlsbad

Job Notes

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

Authorization



Generated
12/30/2022 12:38:28 PM

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

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Laboratory Job ID: 890-3687-1
SDG: 32.181380,-103.638525

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Definitions/Glossary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
SDG: 32.181380,-103.638525

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
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.
α	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

Case Narrative

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
SDG: 32.181380,-103.638525

Job ID: 890-3687-1

Laboratory: Eurofins Carlsbad

Narrative

**Job Narrative
890-3687-1**

Receipt

The sample was received on 12/20/2022 2:21 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: SS03 (890-3687-1).

GC VOA

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-42758 and analytical batch 880-42900 recovered outside control limits for the following analytes: m-Xylene & p-Xylene and o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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 880-42467 and analytical batch 880-42459 was outside the upper control limits.

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

HPLC/IC

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



Client Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
SDG: 32.181380,-103.638525

Client Sample ID: SS03

Lab Sample ID: 890-3687-1

Date Collected: 12/20/22 09:40

Matrix: Solid

Date Received: 12/20/22 14:21

Sample Depth: 0.2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		12/27/22 16:46	12/29/22 18:05	1
Toluene	<0.00202	U	0.00202	mg/Kg		12/27/22 16:46	12/29/22 18:05	1
Ethylbenzene	<0.00202	U **	0.00202	mg/Kg		12/27/22 16:46	12/29/22 18:05	1
m-Xylene & p-Xylene	<0.00403	U ** F1	0.00403	mg/Kg		12/27/22 16:46	12/29/22 18:05	1
o-Xylene	<0.00202	U **	0.00202	mg/Kg		12/27/22 16:46	12/29/22 18:05	1
Xylenes, Total	<0.00403	U **	0.00403	mg/Kg		12/27/22 16:46	12/29/22 18:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	170	S1+	70 - 130	12/27/22 16:46	12/29/22 18:05	1
1,4-Difluorobenzene (Surr)	72		70 - 130	12/27/22 16:46	12/29/22 18:05	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			12/30/22 12:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/27/22 11:28	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/22/22 07:58	12/22/22 16:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		12/22/22 07:58	12/22/22 16:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/22/22 07:58	12/22/22 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	12/22/22 07:58	12/22/22 16:33	1
o-Terphenyl	94		70 - 130	12/22/22 07:58	12/22/22 16:33	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	259		5.00	mg/Kg			12/29/22 12:51	1

Surrogate Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
SDG: 32.181380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-3687-1	SS03	170 S1+	72
890-3687-1 MS	SS03	198 S1+	79
890-3687-1 MSD	SS03	182 S1+	74
LCS 880-42758/1-A	Lab Control Sample	189 S1+	86
LCSD 880-42758/2-A	Lab Control Sample Dup	197 S1+	80
MB 880-42758/5-A	Method Blank	124	72

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
880-23018-A-1-D MS	Matrix Spike	118	94
880-23018-A-1-E MSD	Matrix Spike Duplicate	119	93
890-3687-1	SS03	105	94
LCS 880-42467/2-A	Lab Control Sample	106	117
LCSD 880-42467/3-A	Lab Control Sample Dup	106	99
MB 880-42467/1-A	Method Blank	142 S1+	141 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
SDG: 32.181380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42758/5-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42758

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/27/22 16:46	12/29/22 17:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130	12/27/22 16:46	12/29/22 17:39	1
1,4-Difluorobenzene (Surr)	72		70 - 130	12/27/22 16:46	12/29/22 17:39	1

Lab Sample ID: LCS 880-42758/1-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1142		mg/Kg		114	70 - 130
Toluene	0.100	0.1112		mg/Kg		111	70 - 130
Ethylbenzene	0.100	0.1288		mg/Kg		129	70 - 130
m-Xylene & p-Xylene	0.200	0.2632	*+	mg/Kg		132	70 - 130
o-Xylene	0.100	0.1327	*+	mg/Kg		133	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	189	S1+	70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

Lab Sample ID: LCSD 880-42758/2-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.1196		mg/Kg		120	70 - 130	5	35
Toluene	0.100	0.1153		mg/Kg		115	70 - 130	4	35
Ethylbenzene	0.100	0.1402	*+	mg/Kg		140	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.2850	*+	mg/Kg		142	70 - 130	8	35
o-Xylene	0.100	0.1412	*+	mg/Kg		141	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	197	S1+	70 - 130
1,4-Difluorobenzene (Surr)	80		70 - 130

Lab Sample ID: 890-3687-1 MS
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: SS03
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.100	0.1138		mg/Kg		113	70 - 130
Toluene	<0.00202	U	0.100	0.1086		mg/Kg		108	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: 890-3687-1 MS
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: SS03
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U **	0.100	0.1300		mg/Kg		129	70 - 130
m-Xylene & p-Xylene	<0.00403	U ** F1	0.201	0.2635	F1	mg/Kg		131	70 - 130
o-Xylene	<0.00202	U **	0.100	0.1281		mg/Kg		128	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	198	S1+	70 - 130
1,4-Difluorobenzene (Surr)	79		70 - 130

Lab Sample ID: 890-3687-1 MSD
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: SS03
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0990	0.1047		mg/Kg		106	70 - 130	8	35
Toluene	<0.00202	U	0.0990	0.1008		mg/Kg		102	70 - 130	8	35
Ethylbenzene	<0.00202	U **	0.0990	0.1192		mg/Kg		120	70 - 130	9	35
m-Xylene & p-Xylene	<0.00403	U ** F1	0.198	0.2400		mg/Kg		121	70 - 130	9	35
o-Xylene	<0.00202	U **	0.0990	0.1186		mg/Kg		120	70 - 130	8	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	182	S1+	70 - 130
1,4-Difluorobenzene (Surr)	74		70 - 130

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

Lab Sample ID: MB 880-42467/1-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42467

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	142	S1+	70 - 130	12/22/22 07:58	12/22/22 08:06	1
o-Terphenyl	141	S1+	70 - 130	12/22/22 07:58	12/22/22 08:06	1

Lab Sample ID: LCS 880-42467/2-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1044		mg/Kg		104	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1016		mg/Kg		102	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: LCS 880-42467/2-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42467

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	106		70 - 130
o-Terphenyl	117		70 - 130

Lab Sample ID: LCSD 880-42467/3-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	899.3		mg/Kg		90	70 - 130	15	20	
Diesel Range Organics (Over C10-C28)	1000	881.2		mg/Kg		88	70 - 130	14	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	106		70 - 130
o-Terphenyl	99		70 - 130

Lab Sample ID: 880-23018-A-1-D MS
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec	
				Result	Qualifier				Limits	RPD
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1193		mg/Kg		116	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	999	981.3		mg/Kg		98	70 - 130	

Surrogate	MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	118		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 880-23018-A-1-E MSD
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1200		mg/Kg		117	70 - 130	1	20	
Diesel Range Organics (Over C10-C28)	<50.0	U	997	976.0		mg/Kg		98	70 - 130	1	20	

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	119		70 - 130
o-Terphenyl	93		70 - 130

QC Sample Results

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
 SDG: 32.181380,-103.638525

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42637/1-A
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			12/29/22 11:59	1

Lab Sample ID: LCS 880-42637/2-A
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	257.9		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-42637/3-A
 Matrix: Solid
 Analysis Batch: 42734

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	258.4		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 890-3686-A-1-C MS
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Matrix Spike
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	7320	F1	5030	12660		mg/Kg		106	90 - 110

Lab Sample ID: 890-3686-A-1-D MSD
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	7320	F1	5030	11900		mg/Kg		91	90 - 110	6	20

QC Association Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
SDG: 32.181380,-103.638525

GC VOA

Prep Batch: 42758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3687-1	SS03	Total/NA	Solid	5035	
MB 880-42758/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42758/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42758/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3687-1 MS	SS03	Total/NA	Solid	5035	
890-3687-1 MSD	SS03	Total/NA	Solid	5035	

Analysis Batch: 42900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3687-1	SS03	Total/NA	Solid	8021B	42758
MB 880-42758/5-A	Method Blank	Total/NA	Solid	8021B	42758
LCS 880-42758/1-A	Lab Control Sample	Total/NA	Solid	8021B	42758
LCSD 880-42758/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42758
890-3687-1 MS	SS03	Total/NA	Solid	8021B	42758
890-3687-1 MSD	SS03	Total/NA	Solid	8021B	42758

Analysis Batch: 42959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3687-1	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 42459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3687-1	SS03	Total/NA	Solid	8015B NM	42467
MB 880-42467/1-A	Method Blank	Total/NA	Solid	8015B NM	42467
LCS 880-42467/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42467
LCSD 880-42467/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42467
880-23018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	42467
880-23018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42467

Prep Batch: 42467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3687-1	SS03	Total/NA	Solid	8015NM Prep	
MB 880-42467/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42467/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42467/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 42692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3687-1	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 42637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3687-1	SS03	Soluble	Solid	DI Leach	
MB 880-42637/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
SDG: 32.181380,-103.638525

HPLC/IC (Continued)

Leach Batch: 42637 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3686-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3686-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 42734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3687-1	SS03	Soluble	Solid	300.0	42637
MB 880-42637/1-A	Method Blank	Soluble	Solid	300.0	42637
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	300.0	42637
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42637
890-3686-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	42637
890-3686-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	42637

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- 11
- 12
- 13
- 14

Lab Chronicle

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
 SDG: 32.181380,-103.638525

Client Sample ID: SS03

Lab Sample ID: 890-3687-1

Date Collected: 12/20/22 09:40

Matrix: Solid

Date Received: 12/20/22 14:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	42758	12/27/22 16:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42900	12/29/22 18:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42959	12/30/22 12:53	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42692	12/27/22 11:28	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42467	12/22/22 07:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42459	12/22/22 16:33	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	42637	12/27/22 09:17	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42734	12/29/22 12:51	CH	EET MID

Laboratory References:

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

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- 14

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
SDG: 32.181380,-103.638525

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

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

Method Summary

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
 SDG: 32.181380,-103.638525

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

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3687-1
SDG: 32.181380,-103.638525

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3687-1	SS03	Solid	12/20/22 09:40	12/20/22 14:21	0.2'

- 1
- 2
- 3
- 4
- 5
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Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

www.xenco.com

Page _____ of _____

Project Manager:	Josh Adams	Bill to: (if different)	Katei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	3122 Nat'l Parks Highway	Address:	3122 Nat'l Parks Highway
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	817-683-2503	Email:	jadams@ensolum.com, kjennings@ensolum.com

Program:	UST/PST	<input type="checkbox"/>	PRP	<input type="checkbox"/>	Brownfields	<input type="checkbox"/>	RC	<input type="checkbox"/>	Superfund	<input type="checkbox"/>
State of Project:	NM									
Reporting Level:	Level II	<input type="checkbox"/>	Level III	<input type="checkbox"/>	PST/UST	<input type="checkbox"/>	TRRP	<input type="checkbox"/>	Level IV	<input type="checkbox"/>
Deliverables:	EDD	<input type="checkbox"/>	ADAPT	<input type="checkbox"/>	Other:					

Project Name:	Gold Coast Federal 1H	Turn Around	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Rush	Pres. Code						
Project Number:	03D2024127	Due Date:	32.181380 -103.638525								
Sampler's Name:	Julianna Falcomata	TAT starts the day received by the lab, if received by 4:30pm									
PO #:		Temp Blank	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wet Ice	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No				
SAMPLE RECEIPT		Samples Received In tact:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Thermometer ID:	12200057					
		Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Correction Factor:	-0.03					
		Sample Custody Seals:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Temperature Reading:	3.7					
		Total Containers:				Corrected Temperature:	3.3				



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont.	Parameters													
							BTEX	TPH	CHLORIDES									Sample Comments		
SS08	S	12/22	0940	.2		1	X	X	X											

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		12.20.22 14:21			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3687-1
SDG Number: 32.181380,-103.638525

Login Number: 3687
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3687-1
SDG Number: 32.181380,-103.638525

Login Number: 3687
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 12/22/22 12:50 PM

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

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Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
 Ensolum
 601 N. Marienfeld St.
 Suite 400
 Midland, Texas 79701

Generated 12/30/2022 12:43:12 PM

JOB DESCRIPTION

Gold Coast Federal 1H
 SDG NUMBER 32.181380,-103.638525

JOB NUMBER

890-3689-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220

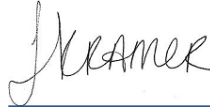


Eurofins Carlsbad

Job Notes

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

Authorization



Generated
12/30/2022 12:43:12 PM

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

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Laboratory Job ID: 890-3689-1
SDG: 32.181380,-103.638525

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Definitions/Glossary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
SDG: 32.181380,-103.638525

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
SDG: 32.181380,-103.638525

Job ID: 890-3689-1

Laboratory: Eurofins Carlsbad**Narrative**

**Job Narrative
890-3689-1****Receipt**

The sample was received on 12/20/2022 2:21 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: SS04 (890-3689-1).

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS04 (890-3689-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-42467 and analytical batch 880-42459 was outside the upper control limits.

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

HPLC/IC

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



Client Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
SDG: 32.181380,-103.638525

Client Sample ID: SS04

Lab Sample ID: 890-3689-1

Date Collected: 12/20/22 09:45

Matrix: Solid

Date Received: 12/20/22 14:21

Sample Depth: 0.2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/27/22 15:00	12/30/22 05:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/27/22 15:00	12/30/22 05:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/27/22 15:00	12/30/22 05:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/27/22 15:00	12/30/22 05:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/27/22 15:00	12/30/22 05:16	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/27/22 15:00	12/30/22 05:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130	12/27/22 15:00	12/30/22 05:16	1
1,4-Difluorobenzene (Surr)	66	S1-	70 - 130	12/27/22 15:00	12/30/22 05:16	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			12/30/22 13:18	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/27/22 11:28	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 16:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 16:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 16:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130	12/22/22 07:58	12/22/22 16:55	1
o-Terphenyl	89		70 - 130	12/22/22 07:58	12/22/22 16:55	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.53		5.01	mg/Kg			12/29/22 13:43	1

Surrogate Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
SDG: 32.181380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-3689-1	SS04	72	66 S1-
890-3696-A-1-E MS	Matrix Spike	109	98
890-3696-A-1-F MSD	Matrix Spike Duplicate	108	92
LCS 880-42737/1-A	Lab Control Sample	105	94
LCSD 880-42737/2-A	Lab Control Sample Dup	95	91
MB 880-42737/5-A	Method Blank	75	85
MB 880-42802/5-A	Method Blank	74	86

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
880-23018-A-1-D MS	Matrix Spike	118	94
880-23018-A-1-E MSD	Matrix Spike Duplicate	119	93
890-3689-1	SS04	92	89
LCS 880-42467/2-A	Lab Control Sample	106	117
LCSD 880-42467/3-A	Lab Control Sample Dup	106	99
MB 880-42467/1-A	Method Blank	142 S1+	141 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
SDG: 32.181380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42737/5-A
Matrix: Solid
Analysis Batch: 42840

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42737

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/27/22 15:00	12/29/22 23:27	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/27/22 15:00	12/29/22 23:27	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		12/27/22 15:00	12/29/22 23:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		12/27/22 15:00	12/29/22 23:27	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		12/27/22 15:00	12/29/22 23:27	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		12/27/22 15:00	12/29/22 23:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75		70 - 130	12/27/22 15:00	12/29/22 23:27	1
1,4-Difluorobenzene (Surr)	85		70 - 130	12/27/22 15:00	12/29/22 23:27	1

Lab Sample ID: LCS 880-42737/1-A
Matrix: Solid
Analysis Batch: 42840

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.0996	0.1057		mg/Kg		106	70 - 130
Toluene	0.0996	0.09401		mg/Kg		94	70 - 130
Ethylbenzene	0.0996	0.09041		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	0.199	0.1926		mg/Kg		97	70 - 130
o-Xylene	0.0996	0.09735		mg/Kg		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: LCSD 880-42737/2-A
Matrix: Solid
Analysis Batch: 42840

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42737

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.0998	0.08878		mg/Kg		89	70 - 130	17	35
Toluene	0.0998	0.08441		mg/Kg		85	70 - 130	11	35
Ethylbenzene	0.0998	0.07686		mg/Kg		77	70 - 130	16	35
m-Xylene & p-Xylene	0.200	0.1644		mg/Kg		82	70 - 130	16	35
o-Xylene	0.0998	0.08365		mg/Kg		84	70 - 130	15	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 890-3696-A-1-E MS
Matrix: Solid
Analysis Batch: 42840

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42737

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.100	0.08650		mg/Kg		86	70 - 130
Toluene	<0.00199	U	0.100	0.08622		mg/Kg		85	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: 890-3696-A-1-E MS
Matrix: Solid
Analysis Batch: 42840

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42737

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.100	0.08343		mg/Kg		83	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1798		mg/Kg		89	70 - 130
o-Xylene	<0.00199	U	0.100	0.09084		mg/Kg		90	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 890-3696-A-1-F MSD
Matrix: Solid
Analysis Batch: 42840

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42737

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0994	0.08977		mg/Kg		90	70 - 130	4	35
Toluene	<0.00199	U	0.0994	0.08424		mg/Kg		84	70 - 130	2	35
Ethylbenzene	<0.00199	U	0.0994	0.07982		mg/Kg		80	70 - 130	4	35
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1690		mg/Kg		84	70 - 130	6	35
o-Xylene	<0.00199	U	0.0994	0.08420		mg/Kg		84	70 - 130	8	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: MB 880-42802/5-A
Matrix: Solid
Analysis Batch: 42840

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42802

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/28/22 13:43	12/29/22 12:54	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/28/22 13:43	12/29/22 12:54	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/28/22 13:43	12/29/22 12:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/28/22 13:43	12/29/22 12:54	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/28/22 13:43	12/29/22 12:54	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/28/22 13:43	12/29/22 12:54	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130	12/28/22 13:43	12/29/22 12:54	1
1,4-Difluorobenzene (Surr)	86		70 - 130	12/28/22 13:43	12/29/22 12:54	1

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

Lab Sample ID: MB 880-42467/1-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42467

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: MB 880-42467/1-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42467

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1
Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac		
	%Recovery	Qualifier						
1-Chlorooctane	142	S1+	70 - 130	12/22/22 07:58	12/22/22 08:06	1		
o-Terphenyl	141	S1+	70 - 130	12/22/22 07:58	12/22/22 08:06	1		

Lab Sample ID: LCS 880-42467/2-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics (Over C10-C28)	1000	1016		mg/Kg		102	70 - 130
Surrogate	LCS LCS		Limits				
	%Recovery	Qualifier					
1-Chlorooctane	106		70 - 130				
o-Terphenyl	117		70 - 130				

Lab Sample ID: LCSD 880-42467/3-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	
								RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	899.3		mg/Kg		90	70 - 130	15	20
Diesel Range Organics (Over C10-C28)	1000	881.2		mg/Kg		88	70 - 130	14	20
Surrogate	LCSD LCSD		Limits						
	%Recovery	Qualifier							
1-Chlorooctane	106		70 - 130						
o-Terphenyl	99		70 - 130						

Lab Sample ID: 880-23018-A-1-D MS
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics (Over C10-C28)	<50.0	U	999	981.3		mg/Kg		98	70 - 130
Surrogate	MS MS		Limits						
	%Recovery	Qualifier							
1-Chlorooctane	118		70 - 130						
o-Terphenyl	94		70 - 130						

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: 880-23018-A-1-E MSD
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1200		mg/Kg		117	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	976.0		mg/Kg		98	70 - 130	1	20
Surrogate	%Recovery	MSD Qualifier	MSD	Limits							
1-Chlorooctane	119			70 - 130							
o-Terphenyl	93			70 - 130							

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42637/1-A
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			12/29/22 11:59	1

Lab Sample ID: LCS 880-42637/2-A
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	257.9		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-42637/3-A
Matrix: Solid
Analysis Batch: 42734

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	258.4		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 890-3686-A-1-C MS
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	7320	F1	5030	12660		mg/Kg		106	90 - 110

Lab Sample ID: 890-3686-A-1-D MSD
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	7320	F1	5030	11900		mg/Kg		91	90 - 110	6	20

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
SDG: 32.181380,-103.638525

GC VOA

Prep Batch: 42737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3689-1	SS04	Total/NA	Solid	5035	
MB 880-42737/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42737/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42737/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3696-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-3696-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 42802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42802/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 42840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3689-1	SS04	Total/NA	Solid	8021B	42737
MB 880-42737/5-A	Method Blank	Total/NA	Solid	8021B	42737
MB 880-42802/5-A	Method Blank	Total/NA	Solid	8021B	42802
LCS 880-42737/1-A	Lab Control Sample	Total/NA	Solid	8021B	42737
LCSD 880-42737/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42737
890-3696-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	42737
890-3696-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	42737

Analysis Batch: 42977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3689-1	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 42459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3689-1	SS04	Total/NA	Solid	8015B NM	42467
MB 880-42467/1-A	Method Blank	Total/NA	Solid	8015B NM	42467
LCS 880-42467/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42467
LCSD 880-42467/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42467
880-23018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	42467
880-23018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42467

Prep Batch: 42467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3689-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-42467/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42467/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42467/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 42693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3689-1	SS04	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
 SDG: 32.181380,-103.638525

HPLC/IC

Leach Batch: 42637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3689-1	SS04	Soluble	Solid	DI Leach	
MB 880-42637/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3686-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3686-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 42734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3689-1	SS04	Soluble	Solid	300.0	42637
MB 880-42637/1-A	Method Blank	Soluble	Solid	300.0	42637
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	300.0	42637
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42637
890-3686-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	42637
890-3686-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	42637

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Lab Chronicle

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
 SDG: 32.181380,-103.638525

Client Sample ID: SS04

Lab Sample ID: 890-3689-1

Date Collected: 12/20/22 09:45

Matrix: Solid

Date Received: 12/20/22 14:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	42737	12/27/22 15:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42840	12/30/22 05:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42977	12/30/22 13:18	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42693	12/27/22 11:28	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42467	12/22/22 07:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42459	12/22/22 16:55	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	42637	12/27/22 09:17	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42734	12/29/22 13:43	CH	EET MID

Laboratory References:

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

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Accreditation/Certification Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
SDG: 32.181380,-103.638525

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

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Method Summary

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
 SDG: 32.181380,-103.638525

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

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3689-1
SDG: 32.181380,-103.638525

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3689-1	SS04	Solid	12/20/22 09:45	12/20/22 14:21	0.2'

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3689-1
SDG Number: 32.181380,-103.638525

Login Number: 3689
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3689-1
SDG Number: 32.181380,-103.638525

Login Number: 3689
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 12/22/22 12:50 PM

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

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Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
 Ensolum
 601 N. Marienfeld St.
 Suite 400
 Midland, Texas 79701

Generated 12/30/2022 12:38:29 PM

JOB DESCRIPTION

Gold Coast Federal 1H
 SDG NUMBER 32.181.380,-103.638525

JOB NUMBER

890-3691-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

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

Authorization



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

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Client: Ensolum
Project/Site: Gold Coast Federal 1H

Laboratory Job ID: 890-3691-1
SDG: 32.181.380,-103.638525

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Definitions/Glossary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
SDG: 32.181.380,-103.638525

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
SDG: 32.181.380,-103.638525

Job ID: 890-3691-1

Laboratory: Eurofins Carlsbad**Narrative**

Job Narrative
890-3691-1

Receipt

The sample was received on 12/20/2022 2:21 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: SS05 (890-3691-1).

GC VOA

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-42758 and analytical batch 880-42900 recovered outside control limits for the following analytes: m-Xylene & p-Xylene and o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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 880-42467 and analytical batch 880-42459 was outside the upper control limits.

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

HPLC/IC

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



Client Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
SDG: 32.181.380,-103.638525

Client Sample ID: SS05

Lab Sample ID: 890-3691-1

Date Collected: 12/20/22 09:50

Matrix: Solid

Date Received: 12/20/22 14:21

Sample Depth: 0.2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		12/27/22 16:46	12/29/22 19:50	1
Toluene	<0.00201	U	0.00201	mg/Kg		12/27/22 16:46	12/29/22 19:50	1
Ethylbenzene	<0.00201	U **	0.00201	mg/Kg		12/27/22 16:46	12/29/22 19:50	1
m-Xylene & p-Xylene	<0.00402	U **	0.00402	mg/Kg		12/27/22 16:46	12/29/22 19:50	1
o-Xylene	<0.00201	U **	0.00201	mg/Kg		12/27/22 16:46	12/29/22 19:50	1
Xylenes, Total	<0.00402	U **	0.00402	mg/Kg		12/27/22 16:46	12/29/22 19:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	197	S1+	70 - 130	12/27/22 16:46	12/29/22 19:50	1
1,4-Difluorobenzene (Surr)	81		70 - 130	12/27/22 16:46	12/29/22 19:50	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			12/30/22 12:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/27/22 11:28	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 17:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 17:39	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	12/22/22 07:58	12/22/22 17:39	1
o-Terphenyl	91		70 - 130	12/22/22 07:58	12/22/22 17:39	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.02	U	5.02	mg/Kg			12/29/22 14:01	1

Surrogate Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
SDG: 32.181.380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-3687-A-1-C MS	Matrix Spike	198 S1+	79
890-3687-A-1-D MSD	Matrix Spike Duplicate	182 S1+	74
890-3691-1	SS05	197 S1+	81
LCS 880-42758/1-A	Lab Control Sample	189 S1+	86
LCSD 880-42758/2-A	Lab Control Sample Dup	197 S1+	80
MB 880-42758/5-A	Method Blank	124	72

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
880-23018-A-1-D MS	Matrix Spike	118	94
880-23018-A-1-E MSD	Matrix Spike Duplicate	119	93
890-3691-1	SS05	98	91
LCS 880-42467/2-A	Lab Control Sample	106	117
LCSD 880-42467/3-A	Lab Control Sample Dup	106	99
MB 880-42467/1-A	Method Blank	142 S1+	141 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
SDG: 32.181.380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42758/5-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42758

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/27/22 16:46	12/29/22 17:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130	12/27/22 16:46	12/29/22 17:39	1
1,4-Difluorobenzene (Surr)	72		70 - 130	12/27/22 16:46	12/29/22 17:39	1

Lab Sample ID: LCS 880-42758/1-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1142		mg/Kg		114	70 - 130
Toluene	0.100	0.1112		mg/Kg		111	70 - 130
Ethylbenzene	0.100	0.1288		mg/Kg		129	70 - 130
m-Xylene & p-Xylene	0.200	0.2632	*+	mg/Kg		132	70 - 130
o-Xylene	0.100	0.1327	*+	mg/Kg		133	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	189	S1+	70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

Lab Sample ID: LCSD 880-42758/2-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.1196		mg/Kg		120	70 - 130	5	35
Toluene	0.100	0.1153		mg/Kg		115	70 - 130	4	35
Ethylbenzene	0.100	0.1402	*+	mg/Kg		140	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.2850	*+	mg/Kg		142	70 - 130	8	35
o-Xylene	0.100	0.1412	*+	mg/Kg		141	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	197	S1+	70 - 130
1,4-Difluorobenzene (Surr)	80		70 - 130

Lab Sample ID: 890-3687-A-1-C MS
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.100	0.1138		mg/Kg		113	70 - 130
Toluene	<0.00202	U	0.100	0.1086		mg/Kg		108	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
SDG: 32.181.380,-103.638525

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

Lab Sample ID: 890-3687-A-1-C MS
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Ethylbenzene	<0.00202	U **	0.100	0.1300		mg/Kg		129	70 - 130
m-Xylene & p-Xylene	<0.00403	U ** F1	0.201	0.2635	F1	mg/Kg		131	70 - 130
o-Xylene	<0.00202	U **	0.100	0.1281		mg/Kg		128	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	198	S1+	70 - 130
1,4-Difluorobenzene (Surr)	79		70 - 130

Lab Sample ID: 890-3687-A-1-D MSD
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Benzene	<0.00202	U	0.0990	0.1047		mg/Kg		106	70 - 130	8	35
Toluene	<0.00202	U	0.0990	0.1008		mg/Kg		102	70 - 130	8	35
Ethylbenzene	<0.00202	U **	0.0990	0.1192		mg/Kg		120	70 - 130	9	35
m-Xylene & p-Xylene	<0.00403	U ** F1	0.198	0.2400		mg/Kg		121	70 - 130	9	35
o-Xylene	<0.00202	U **	0.0990	0.1186		mg/Kg		120	70 - 130	8	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	182	S1+	70 - 130
1,4-Difluorobenzene (Surr)	74		70 - 130

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

Lab Sample ID: MB 880-42467/1-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42467

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	142	S1+	70 - 130	12/22/22 07:58	12/22/22 08:06	1
o-Terphenyl	141	S1+	70 - 130	12/22/22 07:58	12/22/22 08:06	1

Lab Sample ID: LCS 880-42467/2-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Gasoline Range Organics (GRO)-C6-C10	1000	1044		mg/Kg		104	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1016		mg/Kg		102	70 - 130

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QC Sample Results

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
 SDG: 32.181.380,-103.638525

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

Lab Sample ID: LCS 880-42467/2-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42467

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	106		70 - 130
o-Terphenyl	117		70 - 130

Lab Sample ID: LCSD 880-42467/3-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	899.3		mg/Kg		90	70 - 130	15	20	
Diesel Range Organics (Over C10-C28)	1000	881.2		mg/Kg		88	70 - 130	14	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	106		70 - 130
o-Terphenyl	99		70 - 130

Lab Sample ID: 880-23018-A-1-D MS
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1193		mg/Kg		116	70 - 130			
Diesel Range Organics (Over C10-C28)	<50.0	U	999	981.3		mg/Kg		98	70 - 130			

Surrogate	MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	118		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 880-23018-A-1-E MSD
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1200		mg/Kg		117	70 - 130	1	20	
Diesel Range Organics (Over C10-C28)	<50.0	U	997	976.0		mg/Kg		98	70 - 130	1	20	

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	119		70 - 130
o-Terphenyl	93		70 - 130

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QC Sample Results

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
 SDG: 32.181.380,-103.638525

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42637/1-A
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			12/29/22 11:59	1

Lab Sample ID: LCS 880-42637/2-A
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	257.9		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-42637/3-A
 Matrix: Solid
 Analysis Batch: 42734

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	258.4		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 890-3686-A-1-C MS
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Matrix Spike
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	7320	F1	5030	12660		mg/Kg		106	90 - 110

Lab Sample ID: 890-3686-A-1-D MSD
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	7320	F1	5030	11900		mg/Kg		91	90 - 110	6	20

QC Association Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
SDG: 32.181.380,-103.638525

GC VOA

Prep Batch: 42758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3691-1	SS05	Total/NA	Solid	5035	
MB 880-42758/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42758/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42758/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3687-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3687-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 42900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3691-1	SS05	Total/NA	Solid	8021B	42758
MB 880-42758/5-A	Method Blank	Total/NA	Solid	8021B	42758
LCS 880-42758/1-A	Lab Control Sample	Total/NA	Solid	8021B	42758
LCSD 880-42758/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42758
890-3687-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	42758
890-3687-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	42758

Analysis Batch: 42961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3691-1	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 42459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3691-1	SS05	Total/NA	Solid	8015B NM	42467
MB 880-42467/1-A	Method Blank	Total/NA	Solid	8015B NM	42467
LCS 880-42467/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42467
LCSD 880-42467/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42467
880-23018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	42467
880-23018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42467

Prep Batch: 42467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3691-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-42467/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42467/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42467/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 42695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3691-1	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 42637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3691-1	SS05	Soluble	Solid	DI Leach	
MB 880-42637/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
 SDG: 32.181.380,-103.638525

HPLC/IC (Continued)

Leach Batch: 42637 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3686-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3686-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 42734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3691-1	SS05	Soluble	Solid	300.0	42637
MB 880-42637/1-A	Method Blank	Soluble	Solid	300.0	42637
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	300.0	42637
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42637
890-3686-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	42637
890-3686-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	42637

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- 14

Lab Chronicle

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
 SDG: 32.181.380,-103.638525

Client Sample ID: SS05

Lab Sample ID: 890-3691-1

Date Collected: 12/20/22 09:50

Matrix: Solid

Date Received: 12/20/22 14:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	42758	12/27/22 16:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42900	12/29/22 19:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42961	12/30/22 12:53	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42695	12/27/22 11:28	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	42467	12/22/22 07:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42459	12/22/22 17:39	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	42637	12/27/22 09:17	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42734	12/29/22 14:01	CH	EET MID

Laboratory References:

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

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Accreditation/Certification Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
SDG: 32.181.380,-103.638525

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

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

Method Summary

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
 SDG: 32.181.380,-103.638525

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

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3691-1
SDG: 32.181.380,-103.638525

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3691-1	SS05	Solid	12/20/22 09:50	12/20/22 14:21	0.2'

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- 11
- 12
- 13
- 14



Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

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Project Manager:	Josh Adams	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	3122 Nat'l Parks Highway Carlsbad, NM 88220	Address:	3122 Nat'l Parks Highway Carlsbad, NM 88220
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	817-683-2503	Email:	jadams@ensolum.com, kiennings@ensolum.com

Work Order Comments	
Program: <input type="checkbox"/> UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund	
State of Project: <input type="checkbox"/> NM	
Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	
Deliverables: <input type="checkbox"/> EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other: _____	

Project Name:	Gold Coast Federal 1H	Turn Around		Pres. Code	ANALYSIS REQUEST											Preservative Codes					
		<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Rush		None: NO	DI Water: H ₂ O															
Project Number:	03D2024127				Cool: Cool	MeOH: Me															
Project Location:	32.181380, -103.638525	Due Date:			HCL: HC	HNO ₃ : HN															
Sampler's Name:	Juliana Falcomata	TAT starts the day received by the lab, if received by 4:30pm			H ₂ SO ₄ : H ₂	NaOH: Na															
PO #:		Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Thermometer ID:	H ₃ PO ₄ : HP																
SAMPLE RECEIPT		Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Thermometer ID:	NaHSO ₄ : NABIS																
Samples Received Intact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Correction Factor:	N/A		Na ₂ S ₂ O ₃ : NaSO ₃																
Cooler Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Temperature Reading:	N/A		Zn Acetate+NaOH: Zn																
Sample Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Corrected Temperature:	3.3		NaOH+Ascorbic Acid: SAPC																
Total Containers:																					
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab Comp	# of Cont	BTEX	TPH	CHLORIDES												Sample Comments
SDS	S	12-20-22	0950	2'	C	1	X	X	X												



Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SIO₂ Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	12-20-22	<i>[Signature]</i>	<i>[Signature]</i>	12-21

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3691-1
SDG Number: 32.181.380,-103.638525

Login Number: 3691
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3691-1
SDG Number: 32.181.380,-103.638525

Login Number: 3691
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 12/22/22 12:50 PM

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

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Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
 Ensolum
 601 N. Marienfeld St.
 Suite 400
 Midland, Texas 79701

Generated 12/30/2022 12:38:59 PM

JOB DESCRIPTION

Gold Coast Federal 1H
 SDG NUMBER 32.181380,-103.638525

JOB NUMBER

890-3692-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220

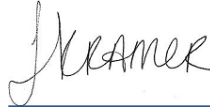


Eurofins Carlsbad

Job Notes

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

Authorization



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12/30/2022 12:38:59 PM

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

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Laboratory Job ID: 890-3692-1
SDG: 32.181380,-103.638525

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Definitions/Glossary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
SDG: 32.181380,-103.638525

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery 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.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
SDG: 32.181380,-103.638525

Job ID: 890-3692-1

Laboratory: Eurofins Carlsbad

Narrative

**Job Narrative
890-3692-1**

Receipt

The sample was received on 12/20/2022 2:21 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: SS06 (890-3692-1).

GC VOA

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-42758 and analytical batch 880-42900 recovered outside control limits for the following analytes: m-Xylene & p-Xylene and o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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 880-42467 and analytical batch 880-42459 was outside the upper control limits.

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

HPLC/IC

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



Client Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
SDG: 32.181380,-103.638525

Client Sample ID: SS06

Lab Sample ID: 890-3692-1

Date Collected: 12/20/22 09:55

Matrix: Solid

Date Received: 12/20/22 14:21

Sample Depth: 0.2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/27/22 16:46	12/29/22 20:16	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/27/22 16:46	12/29/22 20:16	1
Ethylbenzene	<0.00199	U **	0.00199	mg/Kg		12/27/22 16:46	12/29/22 20:16	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		12/27/22 16:46	12/29/22 20:16	1
o-Xylene	<0.00199	U **	0.00199	mg/Kg		12/27/22 16:46	12/29/22 20:16	1
Xylenes, Total	<0.00398	U **	0.00398	mg/Kg		12/27/22 16:46	12/29/22 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130	12/27/22 16:46	12/29/22 20:16	1
1,4-Difluorobenzene (Surr)	69	S1-	70 - 130	12/27/22 16:46	12/29/22 20:16	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/30/22 12:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/27/22 11:28	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 18:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 18:01	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 18:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	12/22/22 07:58	12/22/22 18:01	1
o-Terphenyl	92		70 - 130	12/22/22 07:58	12/22/22 18:01	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.01	U	5.01	mg/Kg			12/29/22 14:09	1

Surrogate Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
SDG: 32.181380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-3687-A-1-C MS	Matrix Spike	198 S1+	79
890-3687-A-1-D MSD	Matrix Spike Duplicate	182 S1+	74
890-3692-1	SS06	146 S1+	69 S1-
LCS 880-42758/1-A	Lab Control Sample	189 S1+	86
LCSD 880-42758/2-A	Lab Control Sample Dup	197 S1+	80
MB 880-42758/5-A	Method Blank	124	72

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
880-23018-A-1-D MS	Matrix Spike	118	94
880-23018-A-1-E MSD	Matrix Spike Duplicate	119	93
890-3692-1	SS06	100	92
LCS 880-42467/2-A	Lab Control Sample	106	117
LCSD 880-42467/3-A	Lab Control Sample Dup	106	99
MB 880-42467/1-A	Method Blank	142 S1+	141 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
SDG: 32.181380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42758/5-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42758

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/27/22 16:46	12/29/22 17:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130	12/27/22 16:46	12/29/22 17:39	1
1,4-Difluorobenzene (Surr)	72		70 - 130	12/27/22 16:46	12/29/22 17:39	1

Lab Sample ID: LCS 880-42758/1-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1142		mg/Kg		114	70 - 130
Toluene	0.100	0.1112		mg/Kg		111	70 - 130
Ethylbenzene	0.100	0.1288		mg/Kg		129	70 - 130
m-Xylene & p-Xylene	0.200	0.2632	*+	mg/Kg		132	70 - 130
o-Xylene	0.100	0.1327	*+	mg/Kg		133	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	189	S1+	70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

Lab Sample ID: LCSD 880-42758/2-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.1196		mg/Kg		120	70 - 130	5	35
Toluene	0.100	0.1153		mg/Kg		115	70 - 130	4	35
Ethylbenzene	0.100	0.1402	*+	mg/Kg		140	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.2850	*+	mg/Kg		142	70 - 130	8	35
o-Xylene	0.100	0.1412	*+	mg/Kg		141	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	197	S1+	70 - 130
1,4-Difluorobenzene (Surr)	80		70 - 130

Lab Sample ID: 890-3687-A-1-C MS
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.100	0.1138		mg/Kg		113	70 - 130
Toluene	<0.00202	U	0.100	0.1086		mg/Kg		108	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: 890-3687-A-1-C MS
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Ethylbenzene	<0.00202	U **	0.100	0.1300		mg/Kg		129	70 - 130
m-Xylene & p-Xylene	<0.00403	U ** F1	0.201	0.2635	F1	mg/Kg		131	70 - 130
o-Xylene	<0.00202	U **	0.100	0.1281		mg/Kg		128	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	198	S1+	70 - 130
1,4-Difluorobenzene (Surr)	79		70 - 130

Lab Sample ID: 890-3687-A-1-D MSD
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
	Result	Qualifier		Result	Qualifier						
Benzene	<0.00202	U	0.0990	0.1047		mg/Kg		106	70 - 130	8	35
Toluene	<0.00202	U	0.0990	0.1008		mg/Kg		102	70 - 130	8	35
Ethylbenzene	<0.00202	U **	0.0990	0.1192		mg/Kg		120	70 - 130	9	35
m-Xylene & p-Xylene	<0.00403	U ** F1	0.198	0.2400		mg/Kg		121	70 - 130	9	35
o-Xylene	<0.00202	U **	0.0990	0.1186		mg/Kg		120	70 - 130	8	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	182	S1+	70 - 130
1,4-Difluorobenzene (Surr)	74		70 - 130

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

Lab Sample ID: MB 880-42467/1-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42467

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	142	S1+	70 - 130	12/22/22 07:58	12/22/22 08:06	1
o-Terphenyl	141	S1+	70 - 130	12/22/22 07:58	12/22/22 08:06	1

Lab Sample ID: LCS 880-42467/2-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Gasoline Range Organics (GRO)-C6-C10	1000	1044		mg/Kg		104	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1016		mg/Kg		102	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: LCS 880-42467/2-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42467

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	106		70 - 130
o-Terphenyl	117		70 - 130

Lab Sample ID: LCSD 880-42467/3-A
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	899.3		mg/Kg		90	70 - 130	15		20
Diesel Range Organics (Over C10-C28)	1000	881.2		mg/Kg		88	70 - 130	14		20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	106		70 - 130
o-Terphenyl	99		70 - 130

Lab Sample ID: 880-23018-A-1-D MS
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
									Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1193		mg/Kg		116	70 - 130			
Diesel Range Organics (Over C10-C28)	<50.0	U	999	981.3		mg/Kg		98	70 - 130			

Surrogate	MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	118		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 880-23018-A-1-E MSD
Matrix: Solid
Analysis Batch: 42459

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42467

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
									Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1200		mg/Kg		117	70 - 130	1		20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	976.0		mg/Kg		98	70 - 130	1		20

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	119		70 - 130
o-Terphenyl	93		70 - 130

QC Sample Results

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
 SDG: 32.181380,-103.638525

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42637/1-A
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			12/29/22 11:59	1

Lab Sample ID: LCS 880-42637/2-A
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	257.9		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-42637/3-A
 Matrix: Solid
 Analysis Batch: 42734

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	258.4		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 890-3686-A-1-C MS
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Matrix Spike
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	7320	F1	5030	12660		mg/Kg		106	90 - 110

Lab Sample ID: 890-3686-A-1-D MSD
 Matrix: Solid
 Analysis Batch: 42734

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	7320	F1	5030	11900		mg/Kg		91	90 - 110	6	20

QC Association Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
SDG: 32.181380,-103.638525

GC VOA

Prep Batch: 42758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3692-1	SS06	Total/NA	Solid	5035	
MB 880-42758/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42758/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42758/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3687-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3687-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 42900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3692-1	SS06	Total/NA	Solid	8021B	42758
MB 880-42758/5-A	Method Blank	Total/NA	Solid	8021B	42758
LCS 880-42758/1-A	Lab Control Sample	Total/NA	Solid	8021B	42758
LCSD 880-42758/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42758
890-3687-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	42758
890-3687-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	42758

Analysis Batch: 42962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3692-1	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 42459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3692-1	SS06	Total/NA	Solid	8015B NM	42467
MB 880-42467/1-A	Method Blank	Total/NA	Solid	8015B NM	42467
LCS 880-42467/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42467
LCSD 880-42467/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42467
880-23018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	42467
880-23018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42467

Prep Batch: 42467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3692-1	SS06	Total/NA	Solid	8015NM Prep	
MB 880-42467/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42467/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42467/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 42696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3692-1	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 42637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3692-1	SS06	Soluble	Solid	DI Leach	
MB 880-42637/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
 SDG: 32.181380,-103.638525

HPLC/IC (Continued)

Leach Batch: 42637 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3686-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3686-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 42734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3692-1	SS06	Soluble	Solid	300.0	42637
MB 880-42637/1-A	Method Blank	Soluble	Solid	300.0	42637
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	300.0	42637
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42637
890-3686-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	42637
890-3686-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	42637

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Lab Chronicle

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
 SDG: 32.181380,-103.638525

Client Sample ID: SS06

Lab Sample ID: 890-3692-1

Date Collected: 12/20/22 09:55

Matrix: Solid

Date Received: 12/20/22 14:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	42758	12/27/22 16:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42900	12/29/22 20:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42962	12/30/22 12:53	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42696	12/27/22 11:28	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42467	12/22/22 07:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42459	12/22/22 18:01	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	42637	12/27/22 09:17	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42734	12/29/22 14:09	CH	EET MID

Laboratory References:

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

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Accreditation/Certification Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
SDG: 32.181380,-103.638525

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

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Method Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
SDG: 32.181380,-103.638525

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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



Sample Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3692-1
SDG: 32.181380,-103.638525

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3692-1	SS06	Solid	12/20/22 09:55	12/20/22 14:21	0.2'

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3692-1
SDG Number: 32.181380,-103.638525

Login Number: 3692
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3692-1
SDG Number: 32.181380,-103.638525

Login Number: 3692
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 12/22/22 12:50 PM

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

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Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
 Ensolum
 601 N. Marienfeld St.
 Suite 400
 Midland, Texas 79701

Generated 12/31/2022 10:18:06 AM

JOB DESCRIPTION

Gold Coast Federal 1H
 SDG NUMBER 32.181380,-103.638525

JOB NUMBER

890-3693-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

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

Authorization



Generated
12/31/2022 10:18:06 AM

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

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Laboratory Job ID: 890-3693-1
SDG: 32.181380,-103.638525

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Definitions/Glossary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
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.
α	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

Case Narrative

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Job ID: 890-3693-1

Laboratory: Eurofins Carlsbad**Narrative**

**Job Narrative
890-3693-1****Receipt**

The samples were received on 12/20/2022 2:21 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 3.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-3693-1) and SS02 (890-3693-2).

GC VOA

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-42758 and analytical batch 880-42900 recovered outside control limits for the following analytes: m-Xylene & p-Xylene and o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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 880-42468 and analytical batch 880-42463 was outside the upper control limits.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-42468 and analytical batch 880-42463 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-42626 and analytical batch 880-42660 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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 880-42637 and analytical batch 880-42734 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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



Client Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Client Sample ID: SS01

Lab Sample ID: 890-3693-1

Date Collected: 12/20/22 09:30

Matrix: Solid

Date Received: 12/20/22 14:21

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		12/27/22 16:46	12/29/22 20:41	1
Toluene	<0.00198	U	0.00198	mg/Kg		12/27/22 16:46	12/29/22 20:41	1
Ethylbenzene	<0.00198	U **	0.00198	mg/Kg		12/27/22 16:46	12/29/22 20:41	1
m-Xylene & p-Xylene	<0.00396	U **	0.00396	mg/Kg		12/27/22 16:46	12/29/22 20:41	1
o-Xylene	<0.00198	U **	0.00198	mg/Kg		12/27/22 16:46	12/29/22 20:41	1
Xylenes, Total	<0.00396	U **	0.00396	mg/Kg		12/27/22 16:46	12/29/22 20:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	173	S1+	70 - 130	12/27/22 16:46	12/29/22 20:41	1
1,4-Difluorobenzene (Surr)	73		70 - 130	12/27/22 16:46	12/29/22 20:41	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			12/30/22 12:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/27/22 10:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		12/22/22 08:02	12/22/22 16:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		12/22/22 08:02	12/22/22 16:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/22/22 08:02	12/22/22 16:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130	12/22/22 08:02	12/22/22 16:54	1
1-Chlorooctane	82		70 - 130	12/22/22 08:02	12/22/22 17:16	1
o-Terphenyl	91		70 - 130	12/22/22 08:02	12/22/22 16:54	1
o-Terphenyl	85		70 - 130	12/22/22 08:02	12/22/22 17:16	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6980		50.0	mg/Kg			12/29/22 14:18	10

Client Sample ID: SS02

Lab Sample ID: 890-3693-2

Date Collected: 12/20/22 09:35

Matrix: Solid

Date Received: 12/20/22 14:21

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/27/22 16:46	12/29/22 21:08	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/27/22 16:46	12/29/22 21:08	1
Ethylbenzene	<0.00199	U **	0.00199	mg/Kg		12/27/22 16:46	12/29/22 21:08	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		12/27/22 16:46	12/29/22 21:08	1
o-Xylene	<0.00199	U **	0.00199	mg/Kg		12/27/22 16:46	12/29/22 21:08	1
Xylenes, Total	<0.00398	U **	0.00398	mg/Kg		12/27/22 16:46	12/29/22 21:08	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
 SDG: 32.181380,-103.638525

Client Sample ID: SS02

Lab Sample ID: 890-3693-2

Date Collected: 12/20/22 09:35

Matrix: Solid

Date Received: 12/20/22 14:21

Sample Depth: 2'

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	194	S1+	70 - 130	12/27/22 16:46	12/29/22 21:08	1
1,4-Difluorobenzene (Surr)	74		70 - 130	12/27/22 16:46	12/29/22 21:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/30/22 12:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/28/22 12:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *-	50.0	mg/Kg		12/27/22 08:39	12/27/22 21:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/27/22 08:39	12/27/22 21:50	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/27/22 08:39	12/27/22 21:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	127		70 - 130	12/27/22 08:39	12/27/22 21:50	1
o-Terphenyl	120		70 - 130	12/27/22 08:39	12/27/22 21:50	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5340	F1	50.0	mg/Kg			12/29/22 14:27	10

Surrogate Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-3687-A-1-C MS	Matrix Spike	198 S1+	79
890-3687-A-1-D MSD	Matrix Spike Duplicate	182 S1+	74
890-3693-1	SS01	173 S1+	73
890-3693-2	SS02	194 S1+	74
LCS 880-42758/1-A	Lab Control Sample	189 S1+	86
LCSD 880-42758/2-A	Lab Control Sample Dup	197 S1+	80
MB 880-42758/5-A	Method Blank	124	72

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
880-22965-A-21-E MS	Matrix Spike	98	85
880-22965-A-21-F MSD	Matrix Spike Duplicate	103	91
880-23040-A-1-E MS	Matrix Spike	111	95
880-23040-A-1-F MSD	Matrix Spike Duplicate	100	88
890-3693-1	SS01	86	91
890-3693-1	SS01	82	85
890-3693-2	SS02	127	120
LCS 880-42468/2-A	Lab Control Sample	99	100
LCS 880-42626/2-A	Lab Control Sample	100	98
LCSD 880-42468/3-A	Lab Control Sample Dup	117	117
LCSD 880-42626/3-A	Lab Control Sample Dup	96	105
MB 880-42468/1-A	Method Blank	128	132 S1+
MB 880-42626/1-A	Method Blank	100	102

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42758/5-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42758

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/27/22 16:46	12/29/22 17:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130	12/27/22 16:46	12/29/22 17:39	1
1,4-Difluorobenzene (Surr)	72		70 - 130	12/27/22 16:46	12/29/22 17:39	1

Lab Sample ID: LCS 880-42758/1-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1142		mg/Kg		114	70 - 130
Toluene	0.100	0.1112		mg/Kg		111	70 - 130
Ethylbenzene	0.100	0.1288		mg/Kg		129	70 - 130
m-Xylene & p-Xylene	0.200	0.2632	*+	mg/Kg		132	70 - 130
o-Xylene	0.100	0.1327	*+	mg/Kg		133	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	189	S1+	70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

Lab Sample ID: LCSD 880-42758/2-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.1196		mg/Kg		120	70 - 130	5	35
Toluene	0.100	0.1153		mg/Kg		115	70 - 130	4	35
Ethylbenzene	0.100	0.1402	*+	mg/Kg		140	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.2850	*+	mg/Kg		142	70 - 130	8	35
o-Xylene	0.100	0.1412	*+	mg/Kg		141	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	197	S1+	70 - 130
1,4-Difluorobenzene (Surr)	80		70 - 130

Lab Sample ID: 890-3687-A-1-C MS
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.100	0.1138		mg/Kg		113	70 - 130
Toluene	<0.00202	U	0.100	0.1086		mg/Kg		108	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: 890-3687-A-1-C MS
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U **	0.100	0.1300		mg/Kg		129	70 - 130
m-Xylene & p-Xylene	<0.00403	U ** F1	0.201	0.2635	F1	mg/Kg		131	70 - 130
o-Xylene	<0.00202	U **	0.100	0.1281		mg/Kg		128	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	198	S1+	70 - 130
1,4-Difluorobenzene (Surr)	79		70 - 130

Lab Sample ID: 890-3687-A-1-D MSD
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0990	0.1047		mg/Kg		106	70 - 130	8	35
Toluene	<0.00202	U	0.0990	0.1008		mg/Kg		102	70 - 130	8	35
Ethylbenzene	<0.00202	U **	0.0990	0.1192		mg/Kg		120	70 - 130	9	35
m-Xylene & p-Xylene	<0.00403	U ** F1	0.198	0.2400		mg/Kg		121	70 - 130	9	35
o-Xylene	<0.00202	U **	0.0990	0.1186		mg/Kg		120	70 - 130	8	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	182	S1+	70 - 130
1,4-Difluorobenzene (Surr)	74		70 - 130

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

Lab Sample ID: MB 880-42468/1-A
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42468

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/22/22 08:02	12/22/22 08:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/22/22 08:02	12/22/22 08:27	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/22/22 08:02	12/22/22 08:27	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130	12/22/22 08:02	12/22/22 08:27	1
o-Terphenyl	132	S1+	70 - 130	12/22/22 08:02	12/22/22 08:27	1

Lab Sample ID: LCS 880-42468/2-A
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42468

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	790.5		mg/Kg		79	70 - 130
Diesel Range Organics (Over C10-C28)	1000	837.0		mg/Kg		84	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: LCS 880-42468/2-A
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42468

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	99		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: LCSD 880-42468/3-A
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42468

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	977.6	*1	mg/Kg		98	70 - 130	21	20	
Diesel Range Organics (Over C10-C28)	1000	1006		mg/Kg		101	70 - 130	18	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	117		70 - 130
o-Terphenyl	117		70 - 130

Lab Sample ID: 880-22965-A-21-E MS
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42468

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec	
				Result	Qualifier				Limits	RPD
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	999	889.9		mg/Kg		86	70 - 130	
Diesel Range Organics (Over C10-C28)	259		999	1028		mg/Kg		77	70 - 130	

Surrogate	MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	98		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 880-22965-A-21-F MSD
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42468

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	997	1025		mg/Kg		99	70 - 130	14	20	
Diesel Range Organics (Over C10-C28)	259		997	1084		mg/Kg		83	70 - 130	5	20	

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	103		70 - 130
o-Terphenyl	91		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: MB 880-42626/1-A
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42626

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/27/22 08:39	12/27/22 13:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/27/22 08:39	12/27/22 13:30	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/27/22 08:39	12/27/22 13:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			12/27/22 08:39	12/27/22 13:30	1
o-Terphenyl	102		70 - 130			12/27/22 08:39	12/27/22 13:30	1

Lab Sample ID: LCS 880-42626/2-A
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42626

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Gasoline Range Organics (GRO)-C6-C10	1000	616.6	*-	mg/Kg		62	70 - 130
Diesel Range Organics (Over C10-C28)	1000	862.0		mg/Kg		86	70 - 130
Surrogate			LCS	LCS			Limits
1-Chlorooctane			100				70 - 130
o-Terphenyl			98				70 - 130

Lab Sample ID: LCSD 880-42626/3-A
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42626

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	
		Result	Qualifier					RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	681.6	*-	mg/Kg		68	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	1000	951.2		mg/Kg		95	70 - 130	10	20
Surrogate			LCSD	LCSD			Limits		
1-Chlorooctane			96				70 - 130		
o-Terphenyl			105				70 - 130		

Lab Sample ID: 880-23040-A-1-E MS
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42626

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	999	1195		mg/Kg		120	70 - 130
Diesel Range Organics (Over C10-C28)	110		999	1100		mg/Kg		99	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: 880-23040-A-1-E MS
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42626

Surrogate	%Recovery	MS MS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 880-23040-A-1-F MSD
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	999	1089		mg/Kg		109	70 - 130	9		20
Diesel Range Organics (Over C10-C28)	110		999	1011		mg/Kg		90	70 - 130	8		20

Surrogate	%Recovery	MSD MSD Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	88		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42637/1-A
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			12/29/22 11:59	1

Lab Sample ID: LCS 880-42637/2-A
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	257.9		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-42637/3-A
Matrix: Solid
Analysis Batch: 42734

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Chloride	250	258.4		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 890-3693-2 MS
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: SS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	5340	F1	2500	8689	F1	mg/Kg		134	90 - 110

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3693-2 MSD
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: SS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5340	F1	2500	8870	F1	mg/Kg		141	90 - 110	2	20

- 1
- 2
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- 11
- 12
- 13
- 14

QC Association Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

GC VOA

Prep Batch: 42758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	5035	
890-3693-2	SS02	Total/NA	Solid	5035	
MB 880-42758/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42758/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42758/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3687-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3687-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 42900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	8021B	42758
890-3693-2	SS02	Total/NA	Solid	8021B	42758
MB 880-42758/5-A	Method Blank	Total/NA	Solid	8021B	42758
LCS 880-42758/1-A	Lab Control Sample	Total/NA	Solid	8021B	42758
LCSD 880-42758/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42758
890-3687-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	42758
890-3687-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	42758

Analysis Batch: 42963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	Total BTEX	
890-3693-2	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 42463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	8015B NM	42468
890-3693-1	SS01	Total/NA	Solid	8015B NM	42468
MB 880-42468/1-A	Method Blank	Total/NA	Solid	8015B NM	42468
LCS 880-42468/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42468
LCSD 880-42468/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42468
880-22965-A-21-E MS	Matrix Spike	Total/NA	Solid	8015B NM	42468
880-22965-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42468

Prep Batch: 42468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	8015NM Prep	
890-3693-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-42468/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42468/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42468/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-22965-A-21-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-22965-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 42626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-42626/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42626/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42626/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

GC Semi VOA (Continued)

Prep Batch: 42626 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-23040-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23040-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 42660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-2	SS02	Total/NA	Solid	8015B NM	42626
MB 880-42626/1-A	Method Blank	Total/NA	Solid	8015B NM	42626
LCS 880-42626/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42626
LCSD 880-42626/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42626
880-23040-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	42626
880-23040-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42626

Analysis Batch: 42670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	8015 NM	
890-3693-2	SS02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 42637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Soluble	Solid	DI Leach	
890-3693-2	SS02	Soluble	Solid	DI Leach	
MB 880-42637/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3693-2 MS	SS02	Soluble	Solid	DI Leach	
890-3693-2 MSD	SS02	Soluble	Solid	DI Leach	

Analysis Batch: 42734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Soluble	Solid	300.0	42637
890-3693-2	SS02	Soluble	Solid	300.0	42637
MB 880-42637/1-A	Method Blank	Soluble	Solid	300.0	42637
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	300.0	42637
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42637
890-3693-2 MS	SS02	Soluble	Solid	300.0	42637
890-3693-2 MSD	SS02	Soluble	Solid	300.0	42637

Lab Chronicle

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
 SDG: 32.181380,-103.638525

Client Sample ID: SS01

Lab Sample ID: 890-3693-1

Date Collected: 12/20/22 09:30

Matrix: Solid

Date Received: 12/20/22 14:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	42758	12/27/22 16:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42900	12/29/22 20:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42963	12/30/22 12:53	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42670	12/27/22 10:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42468	12/22/22 08:02	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42463	12/22/22 16:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42468	12/22/22 08:02	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42463	12/22/22 17:16	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	42637	12/27/22 09:17	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	42734	12/29/22 14:18	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-3693-2

Date Collected: 12/20/22 09:35

Matrix: Solid

Date Received: 12/20/22 14:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	42758	12/27/22 16:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42900	12/29/22 21:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42963	12/30/22 12:53	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42670	12/28/22 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42626	12/27/22 08:39	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42660	12/27/22 21:50	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	42637	12/27/22 09:17	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	42734	12/29/22 14:27	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
- 2
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Method Summary

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
 SDG: 32.181380,-103.638525

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

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3693-1	SS01	Solid	12/20/22 09:30	12/20/22 14:21	2'
890-3693-2	SS02	Solid	12/20/22 09:35	12/20/22 14:21	2'

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Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

www.xenco.com

Page _____ of _____

Project Manager:	Josh Adams	Bill to: (if different)	Kaler Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	3122 Nat'l Parks Highway	Address:	3122 Nat'l Parks Highway
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	817-683-2503	Email:	jadams@ensolum.com, kjennings@ensolum.com

Program: UST/PST	<input type="checkbox"/> PRP	<input type="checkbox"/> Brownfields	<input type="checkbox"/> RC	<input type="checkbox"/> Superfund
State of Project:	NM			
Reporting: Level II	<input type="checkbox"/>	Level III	<input type="checkbox"/>	PST/UST
TRRP	<input type="checkbox"/>	Level IV	<input type="checkbox"/>	
Deliverables: EDD	<input type="checkbox"/>	ADAPT	<input type="checkbox"/>	Other:

Project Name:	Gold Coast Federal 1H	Turn Around	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Rush	Para. Code	
Project Number:	0302024127	Due Date:				
Project Location:	32.181380 -103.638525	TAT starts the day received by the lab, if received by 4:30pm				
Sampler's Name:	Juliana Falcomata	Wet Ice:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
PO #:		Thermometer ID:	11111111			
SAMPLE RECEIPT	Samples Received Intact:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Correction Factor:	-0.2	
	Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Temperature Reading:	3.4	
	Sample Custody Seals:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Corrected Temperature:	3.2	
	Total Containers:					
	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp



890-3693 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	Preservative Codes	Sample Comments
SS01	S	12-20-12	0930	21	0	1	BTEX, TPH, CHLORIDES	None: NO, DI Water: H ₂ O, Cool: Cool, HCL: HC, H ₂ SO ₄ : H ₂ , H ₃ PO ₄ : HP, NaHSO ₄ : NABIS, Na ₂ S ₂ O ₃ : NaSO ₃ , Zn Acetate+NaOH: Zn, NaOH+Ascorbic Acid: SAPC	
SS02	S	12-20-12	0935	21	0	1	BTEX, TPH, CHLORIDES		

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed: TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

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 \$95.00 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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[Signature]	[Signature]	12-20-12 1431			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3693-1
SDG Number: 32.181380,-103.638525

Login Number: 3693
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3693-1
SDG Number: 32.181380,-103.638525

Login Number: 3693
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 12/22/22 12:50 PM

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

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Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 1/24/2023 9:01:42 AM Revision 1

JOB DESCRIPTION

Gold Coast Federal 1H
SDG NUMBER 32.181380,-103.638525

JOB NUMBER

890-3693-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220




Eurofins Carlsbad

Job Notes

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

Authorization



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

Generated
1/24/2023 9:01:42 AM
Revision 1

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Laboratory Job ID: 890-3693-1
SDG: 32.181380,-103.638525

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Definitions/Glossary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

Eurofins Carlsbad

Case Narrative

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Job ID: 890-3693-1

Laboratory: Eurofins Carlsbad

Narrative

**Job Narrative
890-3693-1**

REVISION

The report being provided is a revision of the original report sent on 12/31/2022. The report (revision 1) is being revised due to Per client email, requesting sample depth change from 2' to 0.2'.

Report revision history

Receipt

The samples were received on 12/20/2022 2:21 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 3.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-3693-1) and SS02 (890-3693-2).

GC VOA

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-42758 and analytical batch 880-42900 recovered outside control limits for the following analytes: m-Xylene & p-Xylene and o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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 880-42468 and analytical batch 880-42463 was outside the upper control limits.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-42468 and analytical batch 880-42463 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-42626 and analytical batch 880-42660 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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 880-42637 and analytical batch 880-42734 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Client Sample ID: SS01

Lab Sample ID: 890-3693-1

Date Collected: 12/20/22 09:30

Matrix: Solid

Date Received: 12/20/22 14:21

Sample Depth: 0.2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		12/27/22 16:46	12/29/22 20:41	1
Toluene	<0.00198	U	0.00198	mg/Kg		12/27/22 16:46	12/29/22 20:41	1
Ethylbenzene	<0.00198	U **	0.00198	mg/Kg		12/27/22 16:46	12/29/22 20:41	1
m-Xylene & p-Xylene	<0.00396	U **	0.00396	mg/Kg		12/27/22 16:46	12/29/22 20:41	1
o-Xylene	<0.00198	U **	0.00198	mg/Kg		12/27/22 16:46	12/29/22 20:41	1
Xylenes, Total	<0.00396	U **	0.00396	mg/Kg		12/27/22 16:46	12/29/22 20:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	173	S1+	70 - 130	12/27/22 16:46	12/29/22 20:41	1
1,4-Difluorobenzene (Surr)	73		70 - 130	12/27/22 16:46	12/29/22 20:41	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			12/30/22 12:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/27/22 10:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		12/22/22 08:02	12/22/22 16:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		12/22/22 08:02	12/22/22 16:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/22/22 08:02	12/22/22 16:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130	12/22/22 08:02	12/22/22 16:54	1
1-Chlorooctane	82		70 - 130	12/22/22 08:02	12/22/22 17:16	1
o-Terphenyl	91		70 - 130	12/22/22 08:02	12/22/22 16:54	1
o-Terphenyl	85		70 - 130	12/22/22 08:02	12/22/22 17:16	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6980		50.0	mg/Kg			12/29/22 14:18	10

Client Sample ID: SS02

Lab Sample ID: 890-3693-2

Date Collected: 12/20/22 09:35

Matrix: Solid

Date Received: 12/20/22 14:21

Sample Depth: 0.2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/27/22 16:46	12/29/22 21:08	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/27/22 16:46	12/29/22 21:08	1
Ethylbenzene	<0.00199	U **	0.00199	mg/Kg		12/27/22 16:46	12/29/22 21:08	1
m-Xylene & p-Xylene	<0.00398	U **	0.00398	mg/Kg		12/27/22 16:46	12/29/22 21:08	1
o-Xylene	<0.00199	U **	0.00199	mg/Kg		12/27/22 16:46	12/29/22 21:08	1
Xylenes, Total	<0.00398	U **	0.00398	mg/Kg		12/27/22 16:46	12/29/22 21:08	1

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Client Sample Results

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
 SDG: 32.181380,-103.638525

Client Sample ID: SS02

Lab Sample ID: 890-3693-2

Date Collected: 12/20/22 09:35

Matrix: Solid

Date Received: 12/20/22 14:21

Sample Depth: 0.2'

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	194	S1+	70 - 130	12/27/22 16:46	12/29/22 21:08	1
1,4-Difluorobenzene (Surr)	74		70 - 130	12/27/22 16:46	12/29/22 21:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/30/22 12:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/28/22 12:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *	50.0	mg/Kg		12/27/22 08:39	12/27/22 21:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/27/22 08:39	12/27/22 21:50	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/27/22 08:39	12/27/22 21:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	127		70 - 130	12/27/22 08:39	12/27/22 21:50	1
o-Terphenyl	120		70 - 130	12/27/22 08:39	12/27/22 21:50	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5340	F1	50.0	mg/Kg			12/29/22 14:27	10

Surrogate Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-3687-A-1-C MS	Matrix Spike	198 S1+	79
890-3687-A-1-D MSD	Matrix Spike Duplicate	182 S1+	74
890-3693-1	SS01	173 S1+	73
890-3693-2	SS02	194 S1+	74
LCS 880-42758/1-A	Lab Control Sample	189 S1+	86
LCSD 880-42758/2-A	Lab Control Sample Dup	197 S1+	80
MB 880-42758/5-A	Method Blank	124	72

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
880-22965-A-21-E MS	Matrix Spike	98	85
880-22965-A-21-F MSD	Matrix Spike Duplicate	103	91
880-23040-A-1-E MS	Matrix Spike	111	95
880-23040-A-1-F MSD	Matrix Spike Duplicate	100	88
890-3693-1	SS01	86	91
890-3693-1	SS01	82	85
890-3693-2	SS02	127	120
LCS 880-42468/2-A	Lab Control Sample	99	100
LCS 880-42626/2-A	Lab Control Sample	100	98
LCSD 880-42468/3-A	Lab Control Sample Dup	117	117
LCSD 880-42626/3-A	Lab Control Sample Dup	96	105
MB 880-42468/1-A	Method Blank	128	132 S1+
MB 880-42626/1-A	Method Blank	100	102

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42758/5-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42758

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/27/22 16:46	12/29/22 17:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/27/22 16:46	12/29/22 17:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130	12/27/22 16:46	12/29/22 17:39	1
1,4-Difluorobenzene (Surr)	72		70 - 130	12/27/22 16:46	12/29/22 17:39	1

Lab Sample ID: LCS 880-42758/1-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1142		mg/Kg		114	70 - 130
Toluene	0.100	0.1112		mg/Kg		111	70 - 130
Ethylbenzene	0.100	0.1288		mg/Kg		129	70 - 130
m-Xylene & p-Xylene	0.200	0.2632	*+	mg/Kg		132	70 - 130
o-Xylene	0.100	0.1327	*+	mg/Kg		133	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	189	S1+	70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

Lab Sample ID: LCSD 880-42758/2-A
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1196		mg/Kg		120	70 - 130	5	35
Toluene	0.100	0.1153		mg/Kg		115	70 - 130	4	35
Ethylbenzene	0.100	0.1402	*+	mg/Kg		140	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.2850	*+	mg/Kg		142	70 - 130	8	35
o-Xylene	0.100	0.1412	*+	mg/Kg		141	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	197	S1+	70 - 130
1,4-Difluorobenzene (Surr)	80		70 - 130

Lab Sample ID: 890-3687-A-1-C MS
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.100	0.1138		mg/Kg		113	70 - 130
Toluene	<0.00202	U	0.100	0.1086		mg/Kg		108	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: 890-3687-A-1-C MS
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U *	0.100	0.1300		mg/Kg		129	70 - 130
m-Xylene & p-Xylene	<0.00403	U *+ F1	0.201	0.2635	F1	mg/Kg		131	70 - 130
o-Xylene	<0.00202	U *+	0.100	0.1281		mg/Kg		128	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	198	S1+	70 - 130
1,4-Difluorobenzene (Surr)	79		70 - 130

Lab Sample ID: 890-3687-A-1-D MSD
Matrix: Solid
Analysis Batch: 42900

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42758

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	<0.00202	U	0.0990	0.1047		mg/Kg		106	70 - 130	8	35
Toluene	<0.00202	U	0.0990	0.1008		mg/Kg		102	70 - 130	8	35
Ethylbenzene	<0.00202	U *+	0.0990	0.1192		mg/Kg		120	70 - 130	9	35
m-Xylene & p-Xylene	<0.00403	U *+ F1	0.198	0.2400		mg/Kg		121	70 - 130	9	35
o-Xylene	<0.00202	U *+	0.0990	0.1186		mg/Kg		120	70 - 130	8	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	182	S1+	70 - 130
1,4-Difluorobenzene (Surr)	74		70 - 130

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

Lab Sample ID: MB 880-42468/1-A
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42468

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/22/22 08:02	12/22/22 08:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/22/22 08:02	12/22/22 08:27	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/22/22 08:02	12/22/22 08:27	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130	12/22/22 08:02	12/22/22 08:27	1
o-Terphenyl	132	S1+	70 - 130	12/22/22 08:02	12/22/22 08:27	1

Lab Sample ID: LCS 880-42468/2-A
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42468

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	790.5		mg/Kg		79	70 - 130
Diesel Range Organics (Over C10-C28)	1000	837.0		mg/Kg		84	70 - 130

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QC Sample Results

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
 SDG: 32.181380,-103.638525

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

Lab Sample ID: LCS 880-42468/2-A
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42468

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	99		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: LCSD 880-42468/3-A
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42468

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	977.6	*1	mg/Kg		98	70 - 130	21	20	
Diesel Range Organics (Over C10-C28)	1000	1006		mg/Kg		101	70 - 130	18	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	117		70 - 130
o-Terphenyl	117		70 - 130

Lab Sample ID: 880-22965-A-21-E MS
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42468

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec	
				Result	Qualifier				Limits	RPD
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	999	889.9		mg/Kg		86	70 - 130	
Diesel Range Organics (Over C10-C28)	259		999	1028		mg/Kg		77	70 - 130	

Surrogate	MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	98		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 880-22965-A-21-F MSD
Matrix: Solid
Analysis Batch: 42463

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42468

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	997	1025		mg/Kg		99	70 - 130	14	20	
Diesel Range Organics (Over C10-C28)	259		997	1084		mg/Kg		83	70 - 130	5	20	

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	103		70 - 130
o-Terphenyl	91		70 - 130

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QC Sample Results

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
 SDG: 32.181380,-103.638525

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

Lab Sample ID: MB 880-42626/1-A
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42626

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/27/22 08:39	12/27/22 13:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/27/22 08:39	12/27/22 13:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/27/22 08:39	12/27/22 13:30	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	100		70 - 130	12/27/22 08:39	12/27/22 13:30	1
o-Terphenyl	102		70 - 130	12/27/22 08:39	12/27/22 13:30	1

Lab Sample ID: LCS 880-42626/2-A
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (Over C10-C28)	1000	862.0		mg/Kg		86	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	100		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: LCSD 880-42626/3-A
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42626

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	
								RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	681.6	*-	mg/Kg		68	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	1000	951.2		mg/Kg		95	70 - 130	10	20

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	96		70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: 880-23040-A-1-E MS
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (Over C10-C28)	110		999	1100		mg/Kg		99	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

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

Lab Sample ID: 880-23040-A-1-E MS
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42626

Surrogate	%Recovery	MS MS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 880-23040-A-1-F MSD
Matrix: Solid
Analysis Batch: 42660

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	999	1089		mg/Kg		109	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	110		999	1011		mg/Kg		90	70 - 130	8	20

Surrogate	%Recovery	MSD MSD Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	88		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42637/1-A
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			12/29/22 11:59	1

Lab Sample ID: LCS 880-42637/2-A
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	257.9		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-42637/3-A
Matrix: Solid
Analysis Batch: 42734

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	258.4		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 890-3693-2 MS
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: SS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	5340	F1	2500	8689	F1	mg/Kg		134	90 - 110

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3693-2 MSD
Matrix: Solid
Analysis Batch: 42734

Client Sample ID: SS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5340	F1	2500	8870	F1	mg/Kg		141	90 - 110	2	20

- 1
- 2
- 3
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- 13
- 14

QC Association Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1HJob ID: 890-3693-1
SDG: 32.181380,-103.638525

GC VOA

Prep Batch: 42758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	5035	
890-3693-2	SS02	Total/NA	Solid	5035	
MB 880-42758/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42758/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42758/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3687-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3687-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 42900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	8021B	42758
890-3693-2	SS02	Total/NA	Solid	8021B	42758
MB 880-42758/5-A	Method Blank	Total/NA	Solid	8021B	42758
LCS 880-42758/1-A	Lab Control Sample	Total/NA	Solid	8021B	42758
LCSD 880-42758/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42758
890-3687-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	42758
890-3687-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	42758

Analysis Batch: 42963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	Total BTEX	
890-3693-2	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 42463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	8015B NM	42468
890-3693-1	SS01	Total/NA	Solid	8015B NM	42468
MB 880-42468/1-A	Method Blank	Total/NA	Solid	8015B NM	42468
LCS 880-42468/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42468
LCSD 880-42468/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42468
880-22965-A-21-E MS	Matrix Spike	Total/NA	Solid	8015B NM	42468
880-22965-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42468

Prep Batch: 42468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	8015NM Prep	
890-3693-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-42468/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42468/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42468/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-22965-A-21-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-22965-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 42626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-42626/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42626/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42626/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

GC Semi VOA (Continued)

Prep Batch: 42626 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-23040-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23040-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 42660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-2	SS02	Total/NA	Solid	8015B NM	42626
MB 880-42626/1-A	Method Blank	Total/NA	Solid	8015B NM	42626
LCS 880-42626/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42626
LCSD 880-42626/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42626
880-23040-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	42626
880-23040-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42626

Analysis Batch: 42670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Total/NA	Solid	8015 NM	
890-3693-2	SS02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 42637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Soluble	Solid	DI Leach	
890-3693-2	SS02	Soluble	Solid	DI Leach	
MB 880-42637/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3693-2 MS	SS02	Soluble	Solid	DI Leach	
890-3693-2 MSD	SS02	Soluble	Solid	DI Leach	

Analysis Batch: 42734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3693-1	SS01	Soluble	Solid	300.0	42637
890-3693-2	SS02	Soluble	Solid	300.0	42637
MB 880-42637/1-A	Method Blank	Soluble	Solid	300.0	42637
LCS 880-42637/2-A	Lab Control Sample	Soluble	Solid	300.0	42637
LCSD 880-42637/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42637
890-3693-2 MS	SS02	Soluble	Solid	300.0	42637
890-3693-2 MSD	SS02	Soluble	Solid	300.0	42637

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Lab Chronicle

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Client Sample ID: SS01

Lab Sample ID: 890-3693-1

Date Collected: 12/20/22 09:30

Matrix: Solid

Date Received: 12/20/22 14:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	42758	12/27/22 16:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42900	12/29/22 20:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42963	12/30/22 12:53	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42670	12/27/22 10:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42468	12/22/22 08:02	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42463	12/22/22 16:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42468	12/22/22 08:02	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42463	12/22/22 17:16	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	42637	12/27/22 09:17	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	42734	12/29/22 14:18	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-3693-2

Date Collected: 12/20/22 09:35

Matrix: Solid

Date Received: 12/20/22 14:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	42758	12/27/22 16:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42900	12/29/22 21:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42963	12/30/22 12:53	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42670	12/28/22 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42626	12/27/22 08:39	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42660	12/27/22 21:50	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	42637	12/27/22 09:17	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	42734	12/29/22 14:27	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
- 2
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Method Summary

Client: Ensolum
 Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
 SDG: 32.181380,-103.638525

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

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: Ensolum
Project/Site: Gold Coast Federal 1H

Job ID: 890-3693-1
SDG: 32.181380,-103.638525

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3693-1	SS01	Solid	12/20/22 09:30	12/20/22 14:21	0.2'
890-3693-2	SS02	Solid	12/20/22 09:35	12/20/22 14:21	0.2'

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3693-1
SDG Number: 32.181380,-103.638525

Login Number: 3693
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3693-1
SDG Number: 32.181380,-103.638525

Login Number: 3693
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 12/22/22 12:50 PM

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

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Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Josh Adams
 Ensolum
 601 N. Marienfeld St.
 Suite 400
 Midland, Texas 79701
 Generated 2/13/2023 6:44:11 PM

JOB DESCRIPTION

Gold Coast 26 Fed 1H
 SDG NUMBER 03D20240732

JOB NUMBER

890-4017-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220

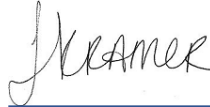


Eurofins Carlsbad

Job Notes

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

Authorization



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2/13/2023 6:44:11 PM

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

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Laboratory Job ID: 890-4017-1
SDG: 03D20240732

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Definitions/Glossary

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
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.
α	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

Case Narrative

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

Job ID: 890-4017-1

Laboratory: Eurofins Carlsbad**Narrative**

**Job Narrative
890-4017-1****Receipt**

The samples were received on 2/3/2023 8:32 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 3.4°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SW01 (890-4017-1) and FS01 (890-4017-2).

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-45763 and analytical batch 880-45729 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 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-45800 and analytical batch 880-46050 was outside the control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS01 (890-4017-2), (890-4017-A-2-C MS) and (890-4017-A-2-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-45800 and analytical batch 880-46050 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

HPLC/IC

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



Client Sample Results

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

Client Sample ID: SW01

Lab Sample ID: 890-4017-1

Date Collected: 02/02/23 12:35

Matrix: Solid

Date Received: 02/03/23 08:32

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		02/09/23 10:23	02/10/23 22:08	1
Toluene	<0.00201	U	0.00201	mg/Kg		02/09/23 10:23	02/10/23 22:08	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		02/09/23 10:23	02/10/23 22:08	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		02/09/23 10:23	02/10/23 22:08	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		02/09/23 10:23	02/10/23 22:08	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		02/09/23 10:23	02/10/23 22:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130			02/09/23 10:23	02/10/23 22:08	1
1,4-Difluorobenzene (Surr)	109		70 - 130			02/09/23 10:23	02/10/23 22:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			02/13/23 18:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/09/23 09:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/08/23 10:22	02/09/23 05:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/08/23 10:22	02/09/23 05:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/08/23 10:22	02/09/23 05:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130			02/08/23 10:22	02/09/23 05:17	1
o-Terphenyl	84		70 - 130			02/08/23 10:22	02/09/23 05:17	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.95	U	4.95	mg/Kg			02/07/23 16:49	1

Client Sample ID: FS01

Lab Sample ID: 890-4017-2

Date Collected: 02/02/23 13:20

Matrix: Solid

Date Received: 02/03/23 08:32

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		02/10/23 15:23	02/11/23 22:58	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/10/23 15:23	02/11/23 22:58	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/10/23 15:23	02/11/23 22:58	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		02/10/23 15:23	02/11/23 22:58	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/10/23 15:23	02/11/23 22:58	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		02/10/23 15:23	02/11/23 22:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			02/10/23 15:23	02/11/23 22:58	1

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Client Sample Results

Client: Ensolum
 Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
 SDG: 03D20240732

Client Sample ID: FS01

Lab Sample ID: 890-4017-2

Date Collected: 02/02/23 13:20

Matrix: Solid

Date Received: 02/03/23 08:32

Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	85		70 - 130	02/10/23 15:23	02/11/23 22:58	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			02/13/23 19:01	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/13/23 14:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/08/23 13:01	02/11/23 11:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U *	50.0	mg/Kg		02/08/23 13:01	02/11/23 11:45	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/08/23 13:01	02/11/23 11:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	60	S1-	70 - 130	02/08/23 13:01	02/11/23 11:45	1
o-Terphenyl	63	S1-	70 - 130	02/08/23 13:01	02/11/23 11:45	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	691		5.05	mg/Kg			02/07/23 16:54	1

Surrogate Summary

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
880-24301-A-1-E MS	Matrix Spike	118	109
880-24301-A-1-F MSD	Matrix Spike Duplicate	118	105
890-4017-1	SW01	119	109
890-4017-2	FS01	98	85
890-4068-A-1-D MS	Matrix Spike	107	97
890-4068-A-1-E MSD	Matrix Spike Duplicate	122	103
LCS 880-45890/1-A	Lab Control Sample	106	104
LCS 880-46022/1-A	Lab Control Sample	123	106
LCSD 880-45890/2-A	Lab Control Sample Dup	107	106
LCSD 880-46022/2-A	Lab Control Sample Dup	110	100
MB 880-45890/5-A	Method Blank	106	105
MB 880-46022/5-A	Method Blank	79	92

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
880-24450-A-14-D MS	Matrix Spike	100	88
880-24450-A-14-E MSD	Matrix Spike Duplicate	113	102
890-4017-1	SW01	85	84
890-4017-2	FS01	60 S1-	63 S1-
890-4017-2 MS	FS01	58 S1-	54 S1-
890-4017-2 MSD	FS01	54 S1-	47 S1-
LCS 880-45763/2-A	Lab Control Sample	120	113
LCS 880-45800/2-A	Lab Control Sample	78	79
LCSD 880-45763/3-A	Lab Control Sample Dup	121	110
LCSD 880-45800/3-A	Lab Control Sample Dup	93	96
MB 880-45763/1-A	Method Blank	136 S1+	139 S1+
MB 880-45800/1-A	Method Blank	67 S1-	72

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45890/5-A
Matrix: Solid
Analysis Batch: 45955

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45890

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/09/23 10:23	02/10/23 13:42	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/09/23 10:23	02/10/23 13:42	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/09/23 10:23	02/10/23 13:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/09/23 10:23	02/10/23 13:42	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/09/23 10:23	02/10/23 13:42	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/09/23 10:23	02/10/23 13:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	02/09/23 10:23	02/10/23 13:42	1
1,4-Difluorobenzene (Surr)	105		70 - 130	02/09/23 10:23	02/10/23 13:42	1

Lab Sample ID: LCS 880-45890/1-A
Matrix: Solid
Analysis Batch: 45955

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45890

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09992		mg/Kg		100	70 - 130
Toluene	0.100	0.1029		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.1033		mg/Kg		103	70 - 130
m-Xylene & p-Xylene	0.200	0.2205		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1045		mg/Kg		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-45890/2-A
Matrix: Solid
Analysis Batch: 45955

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45890

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.09865		mg/Kg		99	70 - 130	1	35
Toluene	0.100	0.1003		mg/Kg		100	70 - 130	3	35
Ethylbenzene	0.100	0.1014		mg/Kg		101	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2169		mg/Kg		108	70 - 130	2	35
o-Xylene	0.100	0.1035		mg/Kg		104	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 880-24301-A-1-E MS
Matrix: Solid
Analysis Batch: 45955

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45890

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0998	0.1069		mg/Kg		107	70 - 130
Toluene	<0.00199	U	0.0998	0.1075		mg/Kg		108	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

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

Lab Sample ID: 880-24301-A-1-E MS

Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 45955

Prep Batch: 45890

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier		Added	Result				
Ethylbenzene	<0.00199	U	0.0998	0.1083		mg/Kg		108	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.2317		mg/Kg		116	70 - 130
o-Xylene	<0.00199	U	0.0998	0.1102		mg/Kg		110	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	118		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: 880-24301-A-1-F MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 45955

Prep Batch: 45890

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier		Added	Result						
Benzene	<0.00199	U	0.100	0.09775		mg/Kg		97	70 - 130	9	35
Toluene	<0.00199	U	0.100	0.09791		mg/Kg		98	70 - 130	9	35
Ethylbenzene	<0.00199	U	0.100	0.09845		mg/Kg		98	70 - 130	10	35
m-Xylene & p-Xylene	<0.00398	U	0.201	0.2108		mg/Kg		105	70 - 130	9	35
o-Xylene	<0.00199	U	0.100	0.1005		mg/Kg		100	70 - 130	9	35

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

Lab Sample ID: MB 880-46022/5-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 46060

Prep Batch: 46022

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		02/10/23 15:23	02/11/23 15:47	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/10/23 15:23	02/11/23 15:47	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/10/23 15:23	02/11/23 15:47	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/10/23 15:23	02/11/23 15:47	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/10/23 15:23	02/11/23 15:47	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/10/23 15:23	02/11/23 15:47	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	79		70 - 130	02/10/23 15:23	02/11/23 15:47	1
1,4-Difluorobenzene (Surr)	92		70 - 130	02/10/23 15:23	02/11/23 15:47	1

Lab Sample ID: LCS 880-46022/1-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 46060

Prep Batch: 46022

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
		Added	Result				
Benzene	0.100	0.09910		mg/Kg		99	70 - 130
Toluene	0.100	0.09313		mg/Kg		93	70 - 130
Ethylbenzene	0.100	0.1011		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	0.200	0.2210		mg/Kg		110	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

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

Lab Sample ID: LCS 880-46022/1-A
Matrix: Solid
Analysis Batch: 46060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46022

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	0.100	0.1107		mg/Kg		111	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	123		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: LCSD 880-46022/2-A
Matrix: Solid
Analysis Batch: 46060

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46022

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.1111		mg/Kg		111	70 - 130	11	35
Toluene	0.100	0.1077		mg/Kg		108	70 - 130	14	35
Ethylbenzene	0.100	0.1076		mg/Kg		108	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.2306		mg/Kg		115	70 - 130	4	35
o-Xylene	0.100	0.1143		mg/Kg		114	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 890-4068-A-1-D MS
Matrix: Solid
Analysis Batch: 46060

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 46022

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U F2 F1	0.101	0.1077		mg/Kg		107	70 - 130
Toluene	<0.00202	U F2 F1	0.101	0.1040		mg/Kg		103	70 - 130
Ethylbenzene	<0.00202	U F2 F1	0.101	0.1030		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	<0.00403	U F2 F1	0.202	0.2182		mg/Kg		108	70 - 130
o-Xylene	<0.00202	U F2 F1	0.101	0.1077		mg/Kg		107	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 890-4068-A-1-E MSD
Matrix: Solid
Analysis Batch: 46060

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 46022

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	<0.00202	U F2 F1	0.0996	0.1041		mg/Kg		105	70 - 130	3	35
Toluene	<0.00202	U F2 F1	0.0996	0.1037		mg/Kg		104	70 - 130	0	35
Ethylbenzene	<0.00202	U F2 F1	0.0996	0.1126		mg/Kg		113	70 - 130	9	35
m-Xylene & p-Xylene	<0.00403	U F2 F1	0.199	0.2436		mg/Kg		122	70 - 130	11	35
o-Xylene	<0.00202	U F2 F1	0.0996	0.1207		mg/Kg		121	70 - 130	11	35

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

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

Lab Sample ID: 890-4068-A-1-E MSD
Matrix: Solid
Analysis Batch: 46060

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 46022

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

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

Lab Sample ID: MB 880-45763/1-A
Matrix: Solid
Analysis Batch: 45729

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45763

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/08/23 10:22	02/08/23 21:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/08/23 10:22	02/08/23 21:23	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/08/23 10:22	02/08/23 21:23	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	136	S1+	70 - 130	02/08/23 10:22	02/08/23 21:23	1
o-Terphenyl	139	S1+	70 - 130	02/08/23 10:22	02/08/23 21:23	1

Lab Sample ID: LCS 880-45763/2-A
Matrix: Solid
Analysis Batch: 45729

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45763

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (Over C10-C28)	1000	939.4		mg/Kg		94	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	120		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: LCSD 880-45763/3-A
Matrix: Solid
Analysis Batch: 45729

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45763

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Diesel Range Organics (Over C10-C28)	1000	922.4		mg/Kg		92	70 - 130	2	20

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	121		70 - 130
o-Terphenyl	110		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

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

Lab Sample ID: 880-24450-A-14-D MS
Matrix: Solid
Analysis Batch: 45729

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45763

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1 F2	999	684.7	F1	mg/Kg		67		70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	693.6	F1	mg/Kg		67		70 - 130
Surrogate	%Recovery	Qualifier	Limits	MS	MS					
1-Chlorooctane	100		70 - 130							
o-Terphenyl	88		70 - 130							

Lab Sample ID: 880-24450-A-14-E MSD
Matrix: Solid
Analysis Batch: 45729

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45763

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1 F2	999	1045	F2	mg/Kg		103		70 - 130	42	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	806.9		mg/Kg		78		70 - 130	15	20
Surrogate	%Recovery	Qualifier	Limits	MSD	MSD							
1-Chlorooctane	113		70 - 130									
o-Terphenyl	102		70 - 130									

Lab Sample ID: MB 880-45800/1-A
Matrix: Solid
Analysis Batch: 46050

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45800

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/08/23 13:01	02/11/23 09:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/08/23 13:01	02/11/23 09:08	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/08/23 13:01	02/11/23 09:08	1
Surrogate	%Recovery	Qualifier	Limits	MB	MB	Prepared	Analyzed	Dil Fac
1-Chlorooctane	67	S1-	70 - 130			02/08/23 13:01	02/11/23 09:08	1
o-Terphenyl	72		70 - 130			02/08/23 13:01	02/11/23 09:08	1

Lab Sample ID: LCS 880-45800/2-A
Matrix: Solid
Analysis Batch: 46050

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45800

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec	Limits
		Result	Qualifier					
Gasoline Range Organics (GRO)-C6-C10	998	881.9		mg/Kg		88		70 - 130
Diesel Range Organics (Over C10-C28)	998	670.6	*	mg/Kg		67		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

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

Lab Sample ID: LCS 880-45800/2-A
Matrix: Solid
Analysis Batch: 46050

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45800

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	78		70 - 130
o-Terphenyl	79		70 - 130

Lab Sample ID: LCSD 880-45800/3-A
Matrix: Solid
Analysis Batch: 46050

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45800

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	840.2		mg/Kg		84	70 - 130	5	20	
Diesel Range Organics (Over C10-C28)	1000	817.7		mg/Kg		82	70 - 130	20	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	93		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: 890-4017-2 MS
Matrix: Solid
Analysis Batch: 46050

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 45800

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	969.9		mg/Kg		94	70 - 130			
Diesel Range Organics (Over C10-C28)	<50.0	U *-	999	948.8		mg/Kg		92	70 - 130			

Surrogate	MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	58	S1-	70 - 130
o-Terphenyl	54	S1-	70 - 130

Lab Sample ID: 890-4017-2 MSD
Matrix: Solid
Analysis Batch: 46050

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 45800

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	808.5		mg/Kg		78	70 - 130	18	20	
Diesel Range Organics (Over C10-C28)	<50.0	U *-	998	816.6		mg/Kg		79	70 - 130	15	20	

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	54	S1-	70 - 130
o-Terphenyl	47	S1-	70 - 130

QC Sample Results

Client: Ensolum
 Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
 SDG: 03D20240732

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-45663/1-A
 Matrix: Solid
 Analysis Batch: 45708

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			02/07/23 14:48	1

Lab Sample ID: LCS 880-45663/2-A
 Matrix: Solid
 Analysis Batch: 45708

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	258.1		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-45663/3-A
 Matrix: Solid
 Analysis Batch: 45708

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	255.5		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 890-4013-A-11-B MS
 Matrix: Solid
 Analysis Batch: 45708

Client Sample ID: Matrix Spike
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	64.8		249	311.1		mg/Kg		99	90 - 110

Lab Sample ID: 890-4013-A-11-C MSD
 Matrix: Solid
 Analysis Batch: 45708

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	64.8		249	309.4		mg/Kg		98	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

GC VOA

Prep Batch: 45890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-1	SW01	Total/NA	Solid	5035	
MB 880-45890/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45890/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45890/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24301-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-24301-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 45955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-1	SW01	Total/NA	Solid	8021B	45890
MB 880-45890/5-A	Method Blank	Total/NA	Solid	8021B	45890
LCS 880-45890/1-A	Lab Control Sample	Total/NA	Solid	8021B	45890
LCSD 880-45890/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45890
880-24301-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	45890
880-24301-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45890

Prep Batch: 46022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-2	FS01	Total/NA	Solid	5035	
MB 880-46022/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46022/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46022/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4068-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-4068-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 46060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-2	FS01	Total/NA	Solid	8021B	46022
MB 880-46022/5-A	Method Blank	Total/NA	Solid	8021B	46022
LCS 880-46022/1-A	Lab Control Sample	Total/NA	Solid	8021B	46022
LCSD 880-46022/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46022
890-4068-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	46022
890-4068-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	46022

Analysis Batch: 46223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-1	SW01	Total/NA	Solid	Total BTEX	
890-4017-2	FS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 45729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-1	SW01	Total/NA	Solid	8015B NM	45763
MB 880-45763/1-A	Method Blank	Total/NA	Solid	8015B NM	45763
LCS 880-45763/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45763
LCSD 880-45763/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45763
880-24450-A-14-D MS	Matrix Spike	Total/NA	Solid	8015B NM	45763
880-24450-A-14-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45763

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QC Association Summary

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

GC Semi VOA

Prep Batch: 45763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-1	SW01	Total/NA	Solid	8015NM Prep	
MB 880-45763/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45763/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45763/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-24450-A-14-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-24450-A-14-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 45800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-2	FS01	Total/NA	Solid	8015NM Prep	
MB 880-45800/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45800/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45800/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4017-2 MS	FS01	Total/NA	Solid	8015NM Prep	
890-4017-2 MSD	FS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-1	SW01	Total/NA	Solid	8015 NM	
890-4017-2	FS01	Total/NA	Solid	8015 NM	

Analysis Batch: 46050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-2	FS01	Total/NA	Solid	8015B NM	45800
MB 880-45800/1-A	Method Blank	Total/NA	Solid	8015B NM	45800
LCS 880-45800/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45800
LCSD 880-45800/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45800
890-4017-2 MS	FS01	Total/NA	Solid	8015B NM	45800
890-4017-2 MSD	FS01	Total/NA	Solid	8015B NM	45800

HPLC/IC

Leach Batch: 45663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-1	SW01	Soluble	Solid	DI Leach	
890-4017-2	FS01	Soluble	Solid	DI Leach	
MB 880-45663/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45663/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45663/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4013-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4013-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 45708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4017-1	SW01	Soluble	Solid	300.0	45663
890-4017-2	FS01	Soluble	Solid	300.0	45663
MB 880-45663/1-A	Method Blank	Soluble	Solid	300.0	45663
LCS 880-45663/2-A	Lab Control Sample	Soluble	Solid	300.0	45663
LCSD 880-45663/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45663
890-4013-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	45663
890-4013-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	45663

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Lab Chronicle

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

Client Sample ID: SW01

Lab Sample ID: 890-4017-1

Date Collected: 02/02/23 12:35

Matrix: Solid

Date Received: 02/03/23 08:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	45890	02/09/23 10:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45955	02/10/23 22:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46223	02/13/23 18:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			45866	02/09/23 09:45	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45763	02/08/23 10:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45729	02/09/23 05:17	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	45663	02/07/23 09:26	KS	EET MID
Soluble	Analysis	300.0		1			45708	02/07/23 16:49	CH	EET MID

Client Sample ID: FS01

Lab Sample ID: 890-4017-2

Date Collected: 02/02/23 13:20

Matrix: Solid

Date Received: 02/03/23 08:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	46022	02/10/23 15:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46060	02/11/23 22:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46223	02/13/23 19:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			45866	02/13/23 14:26	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	45800	02/08/23 13:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46050	02/11/23 11:45	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	45663	02/07/23 09:26	KS	EET MID
Soluble	Analysis	300.0		1			45708	02/07/23 16:54	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

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- 2
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Method Summary

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

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

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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



Sample Summary

Client: Ensolum
Project/Site: Gold Coast 26 Fed 1H

Job ID: 890-4017-1
SDG: 03D20240732

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4017-1	SW01	Solid	02/02/23 12:35	02/03/23 08:32	0 - 4
890-4017-2	FS01	Solid	02/02/23 13:20	02/03/23 08:32	4

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Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager: Josh Adams
Company Name: Ensolum, LLC
Address: 601 N Marientfield St Suite 400
City, State ZIP: Midland, TX 79701
Phone: 303-517-8438
Email: kjennings@ensolum.com, jadam@ensolum.com

Bill to: (if different)
Company Name: Ensolum, LLC
Address: 601 N Marientfield St Suite 400
City, State ZIP: Midland, TX 79701

Work Order Comments
 Program: UST/PST PRP Brownfields RRC Superfund
 State of Project: _____
 Reporting: Level II Level III PST/UST TRRP Level IV
 Deliverables: EDD ADAPT Other: _____

Project Name:	Gold Coast 26 Fed 1H	<input checked="" type="checkbox"/> Turn Around		Pres. Code						
Project Number:	03D20240732	<input type="checkbox"/> Routine <input type="checkbox"/> Rush								
Project Location:	32.181321, -103.638502	Due Date:								
Sampler's Name:	Julianna Falcomata	TAT starts the day received by the lab, if received by 4:30pm								
PO #:		Temp Blank:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wet Log:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
SAMPLE RECEIPT		Samples Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Thermometer ID:	1111111111					
Cooler Custody Seals:	Yes No	Correction Factor:	N/A							
Sample Custody Seals:	Yes No	Temperature Reading:	N/A							
Total Containers:		Corrected Temperature:	3.3							
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	ANALYSIS REQUEST			
S1001	S	02/02/23	1735	0-1'	C	1	CHLORIDES (EPA: 300.0)			
F501	S	02/02/23	1820	4'	C	1	TPH (8015)			
							BTEX (8021)			



890-4017 Chain of Custody

Preservative Codes
 None: NO
 Cool: Cool
 HCL: HC
 H₂SO₄: H₂
 H₃PO₄: HP
 NAHSO₄: NABIS
 Na₂S₂O₃: NASO₃
 Zn Acetate+NaOH: Zn
 NaOH+Ascorbic Acid: SAPC
 DI Water: H₂O
 MeOH: Me
 HNO₃: HN
 NaOH: Na

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sp As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

1	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
2	[Signature]	[Signature]	03.23.23
3			
4			
5			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4017-1
SDG Number: 03D20240732

Login Number: 4017
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4017-1
SDG Number: 03D20240732

Login Number: 4017
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/06/23 08:40 AM

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

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Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
 Ensolum
 601 N. Marienfeld St.
 Suite 400
 Midland, Texas 79701

Generated 3/8/2023 10:58:49 AM Revision 1

JOB DESCRIPTION

Gold Coast
 SDG NUMBER 03D2024127

JOB NUMBER

890-4135-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220

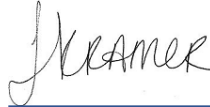


Eurofins Carlsbad

Job Notes

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

Authorization



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

Generated
3/8/2023 10:58:49 AM
Revision 1

Client: Ensolum
Project/Site: Gold Coast

Laboratory Job ID: 890-4135-1
SDG: 03D2024127

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Definitions/Glossary

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
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.
α	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

Case Narrative

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

Job ID: 890-4135-1

Laboratory: Eurofins Carlsbad

Narrative

**Job Narrative
890-4135-1**

REVISION

The report being provided is a revision of the original report sent on 2/28/2023. The report (revision 1) is being revised due to Per client email, requesting sample name correction and sampl depths.

Report revision history

Receipt

The samples were received on 2/17/2023 1:40 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS01A (890-4135-1), SW02 (890-4135-2) and SW03 (890-4135-3).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-47310 and analytical batch 880-47287 was outside the control 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 RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-47003 and analytical batch 880-46994 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28).

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

HPLC/IC

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



Client Sample Results

Client: Ensolum
Project/Site: Gold CoastJob ID: 890-4135-1
SDG: 03D2024127

Client Sample ID: FS01A

Lab Sample ID: 890-4135-1

Date Collected: 02/17/23 11:10

Matrix: Solid

Date Received: 02/17/23 13:40

Sample Depth: 4.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		02/27/23 12:05	02/27/23 14:47	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/27/23 12:05	02/27/23 14:47	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/27/23 12:05	02/27/23 14:47	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		02/27/23 12:05	02/27/23 14:47	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/27/23 12:05	02/27/23 14:47	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		02/27/23 12:05	02/27/23 14:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	02/27/23 12:05	02/27/23 14:47	1
1,4-Difluorobenzene (Surr)	102		70 - 130	02/27/23 12:05	02/27/23 14:47	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			02/28/23 12:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/24/23 13:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		02/23/23 09:12	02/23/23 17:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		02/23/23 09:12	02/23/23 17:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/23/23 09:12	02/23/23 17:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	02/23/23 09:12	02/23/23 17:12	1
o-Terphenyl	102		70 - 130	02/23/23 09:12	02/23/23 17:12	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.02	U	5.02	mg/Kg			02/22/23 22:40	1

Client Sample ID: SW02

Lab Sample ID: 890-4135-2

Date Collected: 02/17/23 11:15

Matrix: Solid

Date Received: 02/17/23 13:40

Sample Depth: 0 - 4.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/27/23 12:05	02/27/23 15:13	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/27/23 12:05	02/27/23 15:13	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/27/23 12:05	02/27/23 15:13	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/27/23 12:05	02/27/23 15:13	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/27/23 12:05	02/27/23 15:13	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/27/23 12:05	02/27/23 15:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	02/27/23 12:05	02/27/23 15:13	1

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Client Sample Results

Client: Ensolum
Project/Site: Gold CoastJob ID: 890-4135-1
SDG: 03D2024127

Client Sample ID: SW02

Lab Sample ID: 890-4135-2

Date Collected: 02/17/23 11:15

Matrix: Solid

Date Received: 02/17/23 13:40

Sample Depth: 0 - 4.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	107		70 - 130	02/27/23 12:05	02/27/23 15:13	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/28/23 12:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/24/23 13:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		02/23/23 09:12	02/23/23 17:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		02/23/23 09:12	02/23/23 17:34	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/23/23 09:12	02/23/23 17:34	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane	91		70 - 130	02/23/23 09:12	02/23/23 17:34	1		
o-Terphenyl	106		70 - 130	02/23/23 09:12	02/23/23 17:34	1		

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.02	U	5.02	mg/Kg			02/22/23 22:58	1

Client Sample ID: SW03

Lab Sample ID: 890-4135-3

Date Collected: 02/17/23 11:20

Matrix: Solid

Date Received: 02/17/23 13:40

Sample Depth: 0 - 4.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/27/23 12:05	02/27/23 15:39	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/27/23 12:05	02/27/23 15:39	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/27/23 12:05	02/27/23 15:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/27/23 12:05	02/27/23 15:39	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/27/23 12:05	02/27/23 15:39	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/27/23 12:05	02/27/23 15:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	02/27/23 12:05	02/27/23 15:39	1
1,4-Difluorobenzene (Surr)	96		70 - 130	02/27/23 12:05	02/27/23 15:39	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/28/23 12:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/24/23 13:21	1

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Client Sample Results

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

Client Sample ID: SW03
Date Collected: 02/17/23 11:20
Date Received: 02/17/23 13:40
Sample Depth: 0 - 4.5'

Lab Sample ID: 890-4135-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		02/23/23 09:12	02/23/23 17:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		02/23/23 09:12	02/23/23 17:56	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/23/23 09:12	02/23/23 17:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130	02/23/23 09:12	02/23/23 17:56	1
o-Terphenyl	97		70 - 130	02/23/23 09:12	02/23/23 17:56	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.99	U	4.99	mg/Kg			02/22/23 23:04	1

Surrogate Summary

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-4135-1	FS01A	94	102
890-4135-1 MS	FS01A	94	104
890-4135-1 MSD	FS01A	94	112
890-4135-2	SW02	108	107
890-4135-3	SW03	96	96
LCS 880-47310/1-A	Lab Control Sample	112	116
LCSD 880-47310/2-A	Lab Control Sample Dup	107	115
MB 880-47310/5-A	Method Blank	67 S1-	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-4123-A-1-F MS	Matrix Spike	107	102
890-4123-A-1-G MSD	Matrix Spike Duplicate	95	89
890-4135-1	FS01A	88	102
890-4135-2	SW02	91	106
890-4135-3	SW03	89	97
LCS 880-47003/2-A	Lab Control Sample	107	116
LCSD 880-47003/3-A	Lab Control Sample Dup	75	85
MB 880-47003/1-A	Method Blank	110	131 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-47310/5-A
Matrix: Solid
Analysis Batch: 47287

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47310

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/27/23 12:05	02/27/23 14:21	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/27/23 12:05	02/27/23 14:21	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/27/23 12:05	02/27/23 14:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/27/23 12:05	02/27/23 14:21	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/27/23 12:05	02/27/23 14:21	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/27/23 12:05	02/27/23 14:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	67	S1-	70 - 130	02/27/23 12:05	02/27/23 14:21	1
1,4-Difluorobenzene (Surr)	93		70 - 130	02/27/23 12:05	02/27/23 14:21	1

Lab Sample ID: LCS 880-47310/1-A
Matrix: Solid
Analysis Batch: 47287

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47310

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1116		mg/Kg		112	70 - 130
Toluene	0.100	0.1199		mg/Kg		120	70 - 130
Ethylbenzene	0.100	0.1156		mg/Kg		116	70 - 130
m-Xylene & p-Xylene	0.200	0.2342		mg/Kg		117	70 - 130
o-Xylene	0.100	0.1224		mg/Kg		122	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	116		70 - 130

Lab Sample ID: LCSD 880-47310/2-A
Matrix: Solid
Analysis Batch: 47287

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47310

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1297		mg/Kg		130	70 - 130	15	35
Toluene	0.100	0.1198		mg/Kg		120	70 - 130	0	35
Ethylbenzene	0.100	0.1198		mg/Kg		120	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2430		mg/Kg		122	70 - 130	4	35
o-Xylene	0.100	0.1212		mg/Kg		121	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	115		70 - 130

Lab Sample ID: 890-4135-1 MS
Matrix: Solid
Analysis Batch: 47287

Client Sample ID: FS01A
Prep Type: Total/NA
Prep Batch: 47310

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U	0.0998	0.08363		mg/Kg		84	70 - 130
Toluene	<0.00198	U	0.0998	0.07891		mg/Kg		79	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

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

Lab Sample ID: 890-4135-1 MS
Matrix: Solid
Analysis Batch: 47287

Client Sample ID: FS01A
Prep Type: Total/NA
Prep Batch: 47310

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U	0.0998	0.07883		mg/Kg		79	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1596		mg/Kg		80	70 - 130
o-Xylene	<0.00198	U	0.0998	0.08053		mg/Kg		81	70 - 130

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

Lab Sample ID: 890-4135-1 MSD
Matrix: Solid
Analysis Batch: 47287

Client Sample ID: FS01A
Prep Type: Total/NA
Prep Batch: 47310

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	<0.00198	U	0.100	0.09210		mg/Kg		92	70 - 130	10	35
Toluene	<0.00198	U	0.100	0.08926		mg/Kg		89	70 - 130	12	35
Ethylbenzene	<0.00198	U	0.100	0.08939		mg/Kg		89	70 - 130	13	35
m-Xylene & p-Xylene	<0.00396	U	0.201	0.1793		mg/Kg		89	70 - 130	12	35
o-Xylene	<0.00198	U	0.100	0.09125		mg/Kg		91	70 - 130	12	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	94		70 - 130
1,4-Difluorobenzene (Surr)	112		70 - 130

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

Lab Sample ID: MB 880-47003/1-A
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47003

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/23/23 09:12	02/23/23 08:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/23/23 09:12	02/23/23 08:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/23/23 09:12	02/23/23 08:36	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130	02/23/23 09:12	02/23/23 08:36	1
o-Terphenyl	131	S1+	70 - 130	02/23/23 09:12	02/23/23 08:36	1

Lab Sample ID: LCS 880-47003/2-A
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1174		mg/Kg		117	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1103		mg/Kg		110	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

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

Lab Sample ID: LCS 880-47003/2-A
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47003

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	107		70 - 130
o-Terphenyl	116		70 - 130

Lab Sample ID: LCSD 880-47003/3-A
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47003

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	908.0	*1	mg/Kg		91	70 - 130	26	20	
Diesel Range Organics (Over C10-C28)	1000	806.6	*1	mg/Kg		81	70 - 130	31	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	75		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-4123-A-1-F MS
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47003

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec	
				Result	Qualifier				Limits	RPD
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	999	1211		mg/Kg		119	70 - 130	
Diesel Range Organics (Over C10-C28)	76.8	*1	999	1121		mg/Kg		105	70 - 130	

Surrogate	MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	107		70 - 130
o-Terphenyl	102		70 - 130

Lab Sample ID: 890-4123-A-1-G MSD
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 47003

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	998	986.4		mg/Kg		97	70 - 130	20	20	
Diesel Range Organics (Over C10-C28)	76.8	*1	998	993.4		mg/Kg		92	70 - 130	12	20	

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	95		70 - 130
o-Terphenyl	89		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-46848/1-A
Matrix: Solid
Analysis Batch: 46984

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			02/22/23 22:21	1

Lab Sample ID: LCS 880-46848/2-A
Matrix: Solid
Analysis Batch: 46984

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	232.9		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 880-46848/3-A
Matrix: Solid
Analysis Batch: 46984

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	232.7		mg/Kg		93	90 - 110	0	20

Lab Sample ID: 890-4135-1 MS
Matrix: Solid
Analysis Batch: 46984

Client Sample ID: FS01A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	<5.02	U	251	240.6		mg/Kg		95	90 - 110

Lab Sample ID: 890-4135-1 MSD
Matrix: Solid
Analysis Batch: 46984

Client Sample ID: FS01A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	<5.02	U	251	240.8		mg/Kg		95	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Gold CoastJob ID: 890-4135-1
SDG: 03D2024127

GC VOA

Analysis Batch: 47287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4135-1	FS01A	Total/NA	Solid	8021B	47310
890-4135-2	SW02	Total/NA	Solid	8021B	47310
890-4135-3	SW03	Total/NA	Solid	8021B	47310
MB 880-47310/5-A	Method Blank	Total/NA	Solid	8021B	47310
LCS 880-47310/1-A	Lab Control Sample	Total/NA	Solid	8021B	47310
LCSD 880-47310/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	47310
890-4135-1 MS	FS01A	Total/NA	Solid	8021B	47310
890-4135-1 MSD	FS01A	Total/NA	Solid	8021B	47310

Prep Batch: 47310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4135-1	FS01A	Total/NA	Solid	5035	
890-4135-2	SW02	Total/NA	Solid	5035	
890-4135-3	SW03	Total/NA	Solid	5035	
MB 880-47310/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-47310/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-47310/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4135-1 MS	FS01A	Total/NA	Solid	5035	
890-4135-1 MSD	FS01A	Total/NA	Solid	5035	

Analysis Batch: 47452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4135-1	FS01A	Total/NA	Solid	Total BTEX	
890-4135-2	SW02	Total/NA	Solid	Total BTEX	
890-4135-3	SW03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 46994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4135-1	FS01A	Total/NA	Solid	8015B NM	47003
890-4135-2	SW02	Total/NA	Solid	8015B NM	47003
890-4135-3	SW03	Total/NA	Solid	8015B NM	47003
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015B NM	47003
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47003
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47003
890-4123-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	47003
890-4123-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47003

Prep Batch: 47003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4135-1	FS01A	Total/NA	Solid	8015NM Prep	
890-4135-2	SW02	Total/NA	Solid	8015NM Prep	
890-4135-3	SW03	Total/NA	Solid	8015NM Prep	
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4123-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4123-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

GC Semi VOA

Analysis Batch: 47166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4135-1	FS01A	Total/NA	Solid	8015 NM	
890-4135-2	SW02	Total/NA	Solid	8015 NM	
890-4135-3	SW03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 46848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4135-1	FS01A	Soluble	Solid	DI Leach	
890-4135-2	SW02	Soluble	Solid	DI Leach	
890-4135-3	SW03	Soluble	Solid	DI Leach	
MB 880-46848/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-46848/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-46848/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4135-1 MS	FS01A	Soluble	Solid	DI Leach	
890-4135-1 MSD	FS01A	Soluble	Solid	DI Leach	

Analysis Batch: 46984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4135-1	FS01A	Soluble	Solid	300.0	46848
890-4135-2	SW02	Soluble	Solid	300.0	46848
890-4135-3	SW03	Soluble	Solid	300.0	46848
MB 880-46848/1-A	Method Blank	Soluble	Solid	300.0	46848
LCS 880-46848/2-A	Lab Control Sample	Soluble	Solid	300.0	46848
LCSD 880-46848/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46848
890-4135-1 MS	FS01A	Soluble	Solid	300.0	46848
890-4135-1 MSD	FS01A	Soluble	Solid	300.0	46848

Lab Chronicle

Client: Ensolum
Project/Site: Gold CoastJob ID: 890-4135-1
SDG: 03D2024127

Client Sample ID: FS01A

Date Collected: 02/17/23 11:10

Date Received: 02/17/23 13:40

Lab Sample ID: 890-4135-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	47310	02/27/23 12:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47287	02/27/23 14:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47452	02/28/23 12:13	SM	EET MID
Total/NA	Analysis	8015 NM		1			47166	02/24/23 13:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47003	02/23/23 09:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/23/23 17:12	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		1			46984	02/22/23 22:40	CH	EET MID

Client Sample ID: SW02

Date Collected: 02/17/23 11:15

Date Received: 02/17/23 13:40

Lab Sample ID: 890-4135-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	47310	02/27/23 12:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47287	02/27/23 15:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47452	02/28/23 12:13	SM	EET MID
Total/NA	Analysis	8015 NM		1			47166	02/24/23 13:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47003	02/23/23 09:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/23/23 17:34	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		1			46984	02/22/23 22:58	CH	EET MID

Client Sample ID: SW03

Date Collected: 02/17/23 11:20

Date Received: 02/17/23 13:40

Lab Sample ID: 890-4135-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	47310	02/27/23 12:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47287	02/27/23 15:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47452	02/28/23 12:13	SM	EET MID
Total/NA	Analysis	8015 NM		1			47166	02/24/23 13:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47003	02/23/23 09:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/23/23 17:56	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		1			46984	02/22/23 23:04	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

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Method Summary

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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



Sample Summary

Client: Ensolum
Project/Site: Gold Coast

Job ID: 890-4135-1
SDG: 03D2024127

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4135-1	FS01A	Solid	02/17/23 11:10	02/17/23 13:40	4.5'
890-4135-2	SW02	Solid	02/17/23 11:15	02/17/23 13:40	0 - 4.5'
890-4135-3	SW03	Solid	02/17/23 11:20	02/17/23 13:40	0 - 4.5'

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Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com

Page _____ of _____

Project Manager:	Hadlie Green	Bill to: (if different)	Katei Jennings
Company Name:	Ensolium, LLC	Company Name:	Ensolium, LLC
Address:	3122 Nat'l Parks Highway	Address:	3122 Nat'l Parks Highway
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	432-557-8895	Email:	hgreen@ensolium.com, kiennings@ensolium.com

Program: <input type="checkbox"/> UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund	
State of Project: NM	
Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	
Deliverables: <input type="checkbox"/> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:	

Project Name:	WADA DUST	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Pres. Code	
Project Number:	850024197				
Project Location:	3251321-10508	Due Date:			
Sampler's Name:	Juliana Falcomata	TAT starts the day received by the lab, if received by 4:30pm			
PO #:					
SAMPLE RECEIPT		Temp Blank:	<input checked="" type="checkbox"/> Gas <input type="checkbox"/> No	Wet Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Samples Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Thermometer ID:	1111111		
Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor:	-0.2		
Sample Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Temperature Reading:	1.0		
Total Containers:		Corrected Temperature:	0.8		

ANALYSIS REQUEST	
Parameters	
BTEX	
LPH	
CHLORIDES	

None: NO	DI Water: H ₂ O
Cool: Cool	MeOH: Me
HCL: HC	HNO ₃ : HN
H ₂ SO ₄ : H ₂	NaOH: Na
H ₃ PO ₄ : HP	
NaHSO ₄ : NABIS	
Na ₂ S ₂ O ₅ : NaSO ₃	
Zn Acetate+NaOH: Zn	
NaOH+Ascorbic Acid: SAPC	

Sample Identification	Matrix	Date Sampled	Time	Depth	Grab Comp	# of Cont	BTEX	LPH	CHLORIDES	Sample Comments
F507	S	2-17-23	11:00	4.5'	0	1	✓	✓		NAPP 22341630400
50002	S		11:15	6'	0	1	✓	✓		
50003	S		11:20	6'	0	1	✓	✓		

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

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 \$95.00 will be applied to each project and a charge of \$8 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		2-17-23 1340			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4135-1
SDG Number: 03D2024127

Login Number: 4135
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4135-1
SDG Number: 03D2024127

Login Number: 4135
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 02/21/23 08:18 AM

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 <6mm (1/4").	True	

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APPENDIX D

NMOCD Notifications

From: [Kalei Jennings](#)
To: [Josh Adams](#)
Subject: FW: [EXTERNAL] ConocoPhillips Company- Sampling Notification (Week of 01/23/2023)
Date: Thursday, January 19, 2023 10:23:05 AM
Attachments: [image005.jpg](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

Please file in appropriate project folders.



Kalei Jennings

Senior Scientist
817-683-2503
Ensolum, LLC



From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Thursday, January 19, 2023 8:14 AM
To: Kalei Jennings <kjennings@ensolum.com>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>
Subject: RE: [EXTERNAL] ConocoPhillips Company- Sampling Notification (Week of 01/23/2023)

[****EXTERNAL EMAIL****]

Kalej,

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.

JH

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, January 18, 2023 9:20 PM

To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Subject: [EXTERNAL] ConocoPhillips Company- Sampling Notification (Week of 01/23/2023)

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

All,

ConocoPhillips Company (COP) plans to complete final sampling activities at the following sites the week of January 23, 2023.

- Redtail State Com 1H/NAPP2233239048
- Wild Cobra/ NAPP2233946889
- Gold Coast/ NAPP2234636400

Thank you,



Kalei Jennings

Senior Scientist

817-683-2503

Ensolum, LLC



From: [Beauvais, Charles R](#)
To: [Hadlie Green](#); [Kalei Jennings](#)
Subject: FW: COG COPC - Extension Request - Gold Coast 26 Federal 001H (Incident Number NAPP2234636400)
Date: Monday, February 27, 2023 4:31:30 PM
Attachments: [image001.png](#)

[**EXTERNAL EMAIL**]

FYI

From: Beauvais, Charles R
Sent: Monday, February 27, 2023 8:16 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; EMNRD-OCD-District1spills <EMNRD-OCD-District1spills@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; CFO_Spill, BLM_NM <BLM_NM_CFO_Spill@blm.gov>
Cc: Esparza, Brittany <Brittany.Esparza@conocophillips.com>; Fejervary Morena, Gustavo A <G.Fejervary@conocophillips.com>
Subject: COG COPC - Extension Request - Gold Coast 26 Federal 001H (Incident Number NAPP2234636400)

To Whom It May Concern,

Gold Coast 26 Federal 001H (Incident Number NAPP2234636400)

COG Operating, LLC (COG) is requesting an extension for the current deadline of March 2, 2023, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for Gold Coast 26 Federal 001H (Incident Number NAPP2234636400). The release was discovered on December 2, 2022. Initial site assessment activities and excavation of impacted soil has been completed. Based on the most recent field screening results, COG believes all impacted soil has been removed; however, laboratory analytical results are pending. In order to complete additional remediation activities and submit a remediation work plan or closure report, COG requests a 90-day extension of this deadline until May 31, 2023.

Respectfully,

Charles R. Beauvais II

Senior Environmental Engineer | GHG Reporting & Systems | **ConocoPhillips**

Permian Business Unit | **L48 Environmental & SD**

(M) 575-988-2043

Charles.R.Beauvais@conocophillips.com

Our work is never so urgent or important that we cannot take the time to do it safely and in an environmentally responsible manner.



From: [Enviro, OCD, EMNRD](#)
To: [Kalei Jennings](#)
Cc: [Bratcher, Michael, EMNRD](#); [Nobui, Jennifer, EMNRD](#)
Subject: RE: [EXTERNAL] ConocoPhillips Company- Sampling Notification (Week of 01/02/2023)
Date: Friday, December 30, 2022 11:43:06 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](http://www.emnrd.nm.gov)



From: Kalei Jennings <kjennings@ensolum.com>
Sent: Friday, December 30, 2022 10:39 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Hadlie Green <hgreen@ensolum.com>; Josh Adams <jadams@ensolum.com>
Subject: [EXTERNAL] ConocoPhillips Company- 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,

ConocoPhillips Company (COP) plans to complete final sampling activities at the following sites the week of January 2, 2023.

- Gold Coast 26 Federal 1 H/ NAPP2234636400

- Wild Cobra 1 State 002H/ NAPP2233946889
- Triste Draw 5 Federal 001H / NAPP2229033410

Thank you,



Kalei Jennings

Senior Scientist

817-683-2503

Ensolum, LLC



From: [Enviro, OCD, EMNRD](#)
To: [Kalei Jennings](#)
Cc: [Nobui, Jennifer, EMNRD](#); [Bratcher, Michael, EMNRD](#)
Subject: RE: [EXTERNAL] ConocoPhillips Company- Sampling Notification (Week of 01/16/2023)
Date: Thursday, January 12, 2023 9:32:55 AM
Attachments: [image005.jpg](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

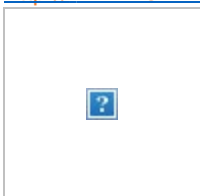
[**EXTERNAL EMAIL**]

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.

JH

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](http://www.emnrd.nm.gov)



From: Kalei Jennings <kjennings@ensolum.com>
Sent: Wednesday, January 11, 2023 5:27 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] ConocoPhillips Company- Sampling Notification (Week of 01/16/2023)

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

All,

ConocoPhillips Company (COP) plans to complete final sampling activities at the following sites the week of January 16, 2023.

- Gold Coast 26 Federal 1 H/ NAPP2234636400
- Redtail State Com 1H/ NAPP222233239048

Thank you,



Kalei Jennings

Senior Scientist

817-683-2503

Ensolum, LLC



From: [Enviro, OCD, EMNRD](#)
To: [Kalei Jennings](#)
Cc: [Nobui, Jennifer, EMNRD](#); [Bratcher, Michael, EMNRD](#)
Subject: RE: [EXTERNAL] ConocoPhillips Company- Sampling Notification (Week of 01/30/2023)
Date: Monday, January 30, 2023 9:22:17 AM
Attachments: [image005.jpg](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

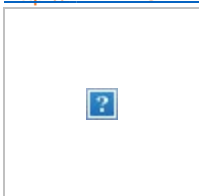
[**EXTERNAL EMAIL**]

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.

JH

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](http://www.emnrd.nm.gov)



From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, January 26, 2023 8:11 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Josh Adams <jadams@ensolum.com>
Subject: [EXTERNAL] ConocoPhillips Company- Sampling Notification (Week of 01/30/2023)

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

All,

ConocoPhillips Company (COP) plans to complete final sampling activities at the following sites the week of January 30, 2023.

- Wild Cobra/ NAPP2233946889
- Gold Coast/ NAPP2234636400
- Zia Hills 19-1/ NAPP2216037138

- Windward Flowline/ NAPP2218850477
- Battle Axe CTB / NAPP2300341479

Thank you,



Kalei Jennings

Senior Scientist

817-683-2503

Ensolum, LLC



From: [Enviro, OCD, EMNRD](#)
To: [Kalei Jennings](#)
Cc: [Nobui, Jennifer, EMNRD](#); [Bratcher, Michael, EMNRD](#)
Subject: RE: [EXTERNAL] ConocoPhillips Company- Sampling Notification (Week of 02/13/2023)
Date: Wednesday, February 8, 2023 4:30:13 PM
Attachments: [image005.jpg](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

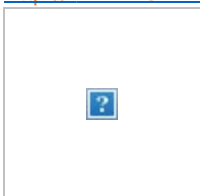
[**EXTERNAL EMAIL**]

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.

JH

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](http://www.emnrd.nm.gov)



From: Kalei Jennings <kjennings@ensolum.com>
Sent: Wednesday, February 8, 2023 2:54 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Hadlie Green <hgreen@ensolum.com>
Subject: [EXTERNAL] ConocoPhillips Company- Sampling Notification (Week of 02/13/2023)

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

All,

ConocoPhillips Company (COP) plans to complete final sampling activities at the following sites the week of February 13, 2023.

- Gold Coast 26 Fed 1H/ NAPP2234636400
- Wilder CTB/ NAPP2300343271
- White Falcon 16 State 001H/ NAPP2301735698

Thank you,



Kalei Jennings

Senior Scientist

817-683-2503

Ensolum, LLC



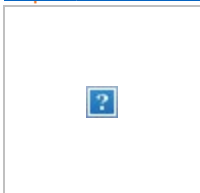
From: [Enviro, OCD, EMNRD](#)
To: [Kalei Jennings](#)
Cc: [Bratcher, Michael, EMNRD](#); [Nobui, Jennifer, EMNRD](#)
Subject: RE: [EXTERNAL] ConocoPhillips Company- Sampling Notification (Week of 12/19/2022)
Date: Wednesday, December 14, 2022 4:43:42 PM
Attachments: [image005.jpg](#)
[image006.png](#)
[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] ConocoPhillips Company- 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,

ConocoPhillips Company (COP) plans to complete final sampling activities at the following sites the week of December 19, 2022.

- Gold Coast 26 Federal 1 H/ NAPP2234636400
- Wild Cobra 1 State 002H/ NAPP2233946889
- Zia Hills 19-1/ NAPP2216037138

Thank you,



Kalei Jennings

Senior Scientist

817-683-2503

Ensolum, LLC





APPENDIX E

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
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2234636400
District RP	
Facility ID	fAPP2203844103
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Charles Beauvais	Contact Telephone	(575) 988-2043
Contact email	Charles.R.Beauvais@ConocoPhillips.com	Incident # (assigned by OCD)	NAPP2234636400
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.1813 Longitude -103.6385
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Gold Coast 26 Federal 001H	Site Type	Flowline
Date Release Discovered	December 2, 2022	API# (if applicable)	

Unit Letter	Section	Township	Range	County
A	35	24S	32E	Lea

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 2.43	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a leak on the water transfer line due to corrosion. The release was off the pad. A Evaluation will be made at the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2234636400
District RP	
Facility ID	fAPP2203844103
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
---	--

If YES, was immediate notice 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

- 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: Brittany N. Esparza Title: Environmental Technician
 Signature:  Date: 12/12/2022
 email: Brittany.Esparza@ConocoPhillips.com Telephone: (432) 221-0398

OCD Only
 Received by: Jocelyn Harimon Date: 12/12/2022

NAPP2234636400

Spill Calculation - Subsurface Spill - Rectangle

Received by OCD: 12/12/2022 11:05:38 AM

Page 3 of 4

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Average Depth (in.)	On/Off Pad (dropdown)	Soil Spilled-Fluid Saturation (%)	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	12.0	22.0	2.0	Off-Pad v	15.05%	7.83	1.18
Rectangle B	25.0	12.0	0.3	Off-Pad v	15.05%	1.11	0.17
Rectangle C	22.0	22.0	1.0	Off-Pad v	15.05%	7.18	1.08
Rectangle D				v		0.00	
Rectangle E				v		0.00	
Rectangle F				v		0.00	
Rectangle G				v		0.00	
Rectangle H				v		0.00	
Rectangle I				v		0.00	
Rectangle J				v		0.00	
Total Subsurface Volume Released:							2.43

Released to Imaging: 12/12/2022 1:50:29 PM

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

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

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

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

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

CONDITIONS

Action 166065

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 166065
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	12/12/2022

Incident ID	NAPP2234636400
District RP	
Facility ID	fAPP2203844103
Application ID	

Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2234636400
District RP	
Facility ID	fAPP2203844103
Application ID	

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

Printed Name: Jacob Laird Title: Environmental Engineer

Signature: *Jacob Laird* Date: 4/28/2023

email: Jacob.Laird@conocophillips.com Telephone: 575-703-5482

OCD Only

Received by: Jocelyn Harimon Date: 05/01/2023

Incident ID	NAPP2234636400
District RP	
Facility ID	fAPP2203844103
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: Jacob Laird Title: Environmental Engineer
Signature: *Jacob Laird* Date: 4/28/2023
email: Jacob.Laird@conocophillips.com Telephone: 575-703-5482

OCD Only

Received by: Jocelyn Harimon Date: 05/01/2023

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

Closure Approved by: *Michael Buchanan* Date: 05/15/2023
Printed Name: Mike Buchanan Title: Environmental Specialist

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

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

COMMENTS

Action 212296

COMMENTS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 212296
	Action Type: [C-141] Release Corrective Action (C-141)

COMMENTS

Created By	Comment	Comment Date
michael.buchanan	Closure is approved	5/15/2023

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

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State of New Mexico
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CONDITIONS

Action 212296

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 212296
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	None	5/15/2023