ENSOLUM

May 25, 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: Remediation Work Plan Addendum
Harrier 35 Federal Com 001H
Incident Number NAPP2225531487
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this *Remediation Work Plan Addendum (Addendum)* to document the delineation activities completed at the Harrier 35 Federal Com 001H (Site). The purpose of the delineation activities was to determine the full lateral and vertical extent of impacted soil resulting from the September 4, 2022, produced water release at the Site. The delineation activites were completed as outlined in the original *Remediation Workplan (Workplan)*, dated December 2, 2023. The New Mexico Oil Conservation Division (NMOCD) approved the *Workplan* on January 5, 2023, with the following conditions:

- *The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.*

The following *Addendum* documents the delineation activities that were completed at the Site as outlined in the approved *Workplan*, and proposes installation of a depth to water boring and excavation of the impacted soil identified at the Site.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit M, Section 25, Township 25 South, Range 32 East, in Lea County, New Mexico (32.0947°, -103.63701°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On September 4, 2022, corrosion of a valve created a pinhole leak, resulting in a release of approximately 6.952 barrels (bbls) of produced water onto the surrounding pasture and lease road. Released fluids were unable to be recovered. COG reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on September 4, 2022, and submitted a *Release Notification Form C-141* (Form C-141) on September 12, 2022. The release was assigned Incident Number NAPP2225531487.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized for 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 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. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 320504103361801, located approximately 1.9 miles southeast of the Site. The groundwater well has a reported depth to groundwater of 232 feet bgs and a total depth of 320 feet bgs. Ground surface elevation at the groundwater well location is 3,403 feet above mean sea level (amsl), which is approximately 6 feet higher in elevation than the Site. 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 an emergent palustrine wetland, located approximately 1,340 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is not within a 100-year floodplain or overlying a subsurface mine. The Site is greater than 1,000 feet to a freshwater well or spring. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

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

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Initial Site assessment and soil sampling activities were completed on October 4, 2022. Laboratory analytical results for preliminary assessment soil samples SS01 through SS04, collected within the release extent at a depth of 0.5 feet bgs, indicated that TPH and/or chloride concentrations exceeded the Site Closure Criteria and/or the reclamation requirement. The release extent and preliminary soil sample locations are presented on Figure 2. Additional details regarding the release and initial assessment activities can be referenced in the original *Workplan* dated, dated December 2, 2023.

On January 19, 2023, delineation activities were conducted at the Site to assess the lateral and vertical extent of impacted soil, as outlined in the approved *Workplan*. Potholes PH01 through PH08 were advanced via backhoe within and around the release extent. The potholes were advanced to a depth of 6 feet bgs. Discrete delineation soil samples were collected from each pothole at depths ranging from

1-foot to 6 feet bgs. Soil from the potholes was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. The delineation soil sample locations are depicted on Figure 3.

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 (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH- GRO, TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for the delineation soil samples collected from potholes PH02 through PH08, advanced around the release extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement. Laboratory analytical results and/or field screening results for the delineation soil samples collected from pothole PH01, advanced within the release extent, indicated elevated chloride concentrations in the top four feet; COC concentrations were compliant with the Site Closure Criteria at depths greater than 4 feet. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix D. Based on the laboratory analytical results for preliminary assessment samples SS01 through SS04 and delineation samples collected from pothole PH01, excavation activities were warranted.

PROPOSED REMEDIATION WORKPLAN

In order to confirm depth to groundwater is greater than 100 feet bgs at the Site, COG proposes to advance a soil boring to a depth of 105 feet bgs. The soil boring will be located within 0.5 miles of the Site and a field geologist will log and describe soils continuously. The soil boring will be left open for over 72 hours to allow for equilibration of groundwater levels within the temporary boring casing. After the 72-hour waiting period, depth to groundwater will be assessed and the soil boring will be backfilled following New Mexico Office of the State Engineer (NMOSE) approved procedures. A well record or soil boring log will be included in the follow up Closure Report.

Following confirmation of depth to groundwater, COG will proceed with excavation of impacted soil to below the reclamation requirement in the top 4 feet and to below the established Site Closure Criteria at depths greater than 4 feet bgs.

- Based on the delineation soil sample analytical results, excavation will be completed in the areas around surface samples SS01 through SS04 and pothole PH01. Excavation will proceed laterally and vertically until sidewall and floor samples indicate COC concentrations are compliant with the reclamation requirement in the top four feet or the Site Closure Criteria at depths greater than 4 feet bgs. The proposed excavation extent is depicted on Figure 4.
- Confirmation samples will be collected from the floor and sidewalls of the final excavation extent. The excavation floor and sidewall samples will be collected at a frequency of every 200 square feet. The 5-point composite samples will be collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The excavation samples will be analyzed for BTEX, TPH, and chloride.
- An estimated 400 cubic yards of impacted soil will be excavated from the Site. The excavated soil will be transferred to a New Mexico approved disposal facility for disposal.
- The excavation will be backfilled and recontoured to match pre-existing conditions. The disturbed pasture area will be re-seeded with an approved BLM seed mixture.

Due to various Site-specific complications and safety concerns, excavation activities may encounter delays. Portions of the release area are located in a heavily trafficked four-way intersection used by several Operators. There are multiple surface and subsurface utilities running north-south through the lease road that will be exposed during remediation activities. The lease road will have to be temporarily closed and diversion of traffic will be required. The lease road will need to be immediately backfilled once field screening activities indicate that impacted soil has been removed. The pasture area lithology consists mainly of caliche bedrock, slowing down hydrovac and/or hand shoveling activities around the surface and subsurface utilities running within the pasture release extent. There are also overhead electrical lines running perpendicular and parallel to the Site that will minimize access with mechanical equipment.

COG will complete the excavation activities within 90 days of the date of approval for this *Addendum* by the NMOCD. The depth to water soil boring will be completed as soon as possible following approval from the surface landowner, receipt of the NMOSE drilling permit, and scheduling with a driller. COG believes the remediation activities described above are protective of human health, the environment, and groundwater. As such, COG respectfully requests approval of this *Remediation Workplan Addendum*.

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
Project Geologist

Aimee Cole
Senior Managing Scientist

cc: Jacob Laird, COG Operating, LLC
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Proposed Excavation Extent
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic/Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	Final C-141
Appendix F	NMOCD Notifications

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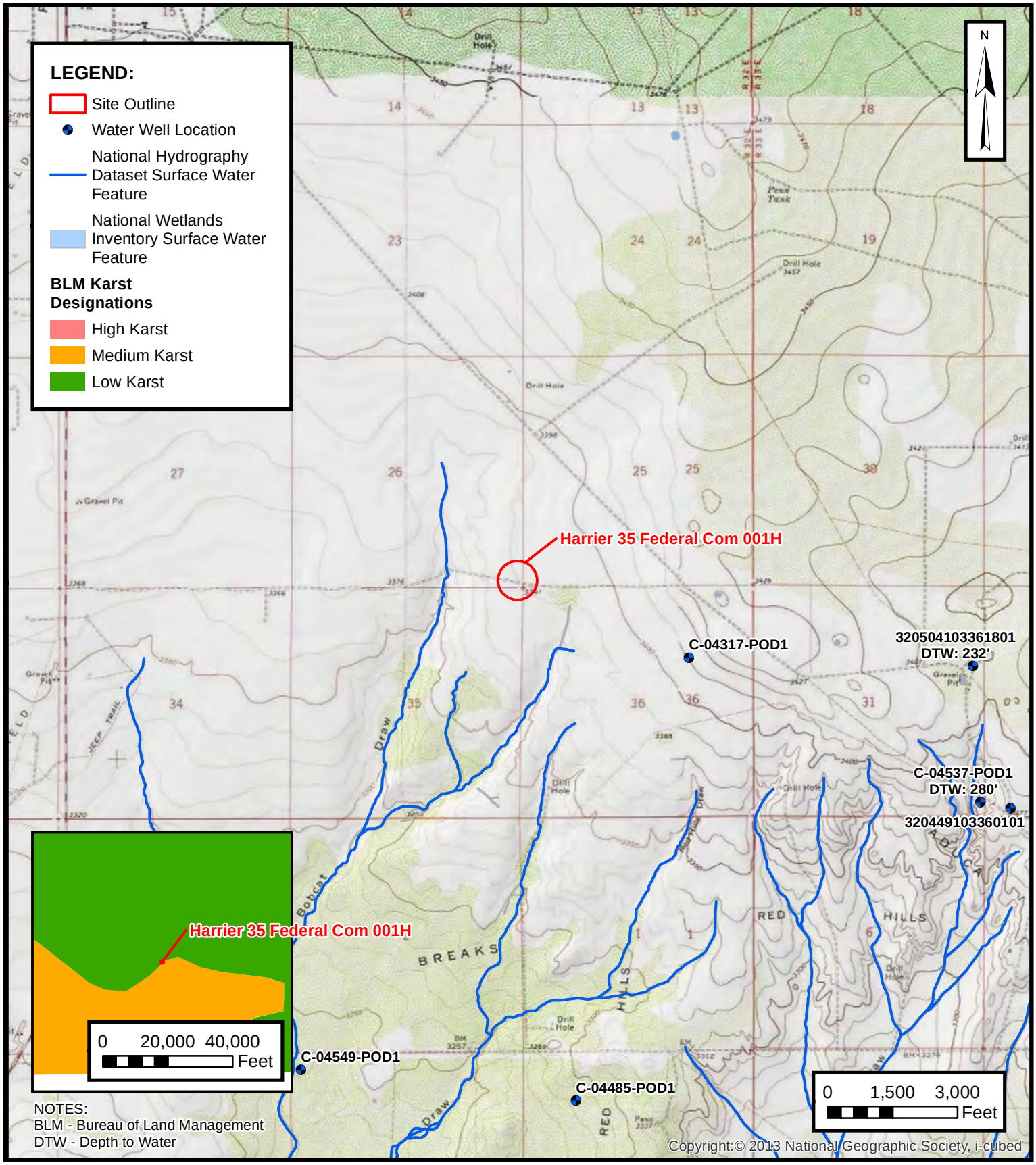
FIGURES



NOTES:
BLM - Bureau of Land Management
DTW - Depth to Water

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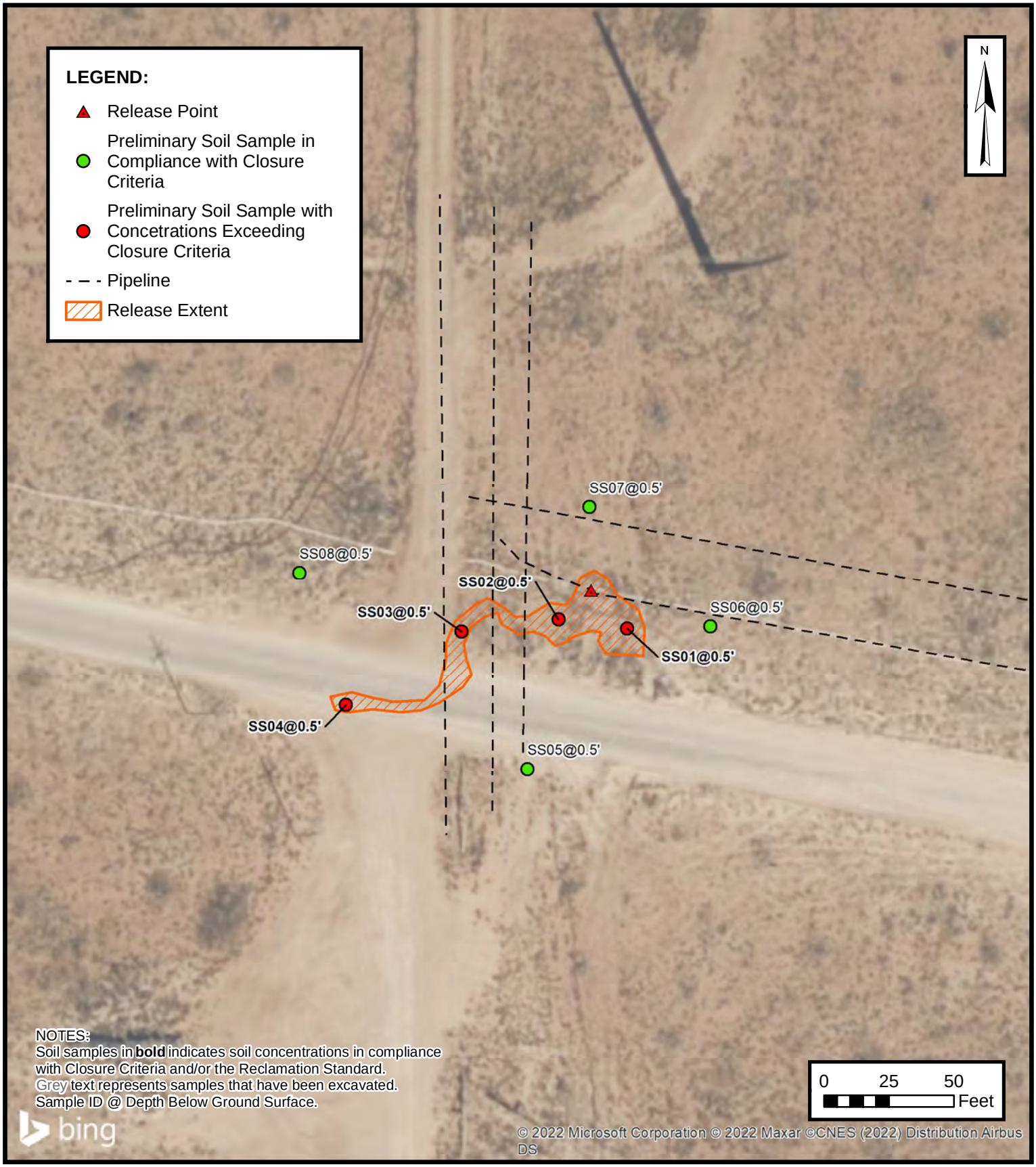
SITE RECEPTOR MAP

COG OPERATING, LLC
HARRIER 35 FEDERAL COM 001H
NAPP2225531487
Unit M Sec 25 T25S R32E
Lea County, New Mexico

FIGURE
1



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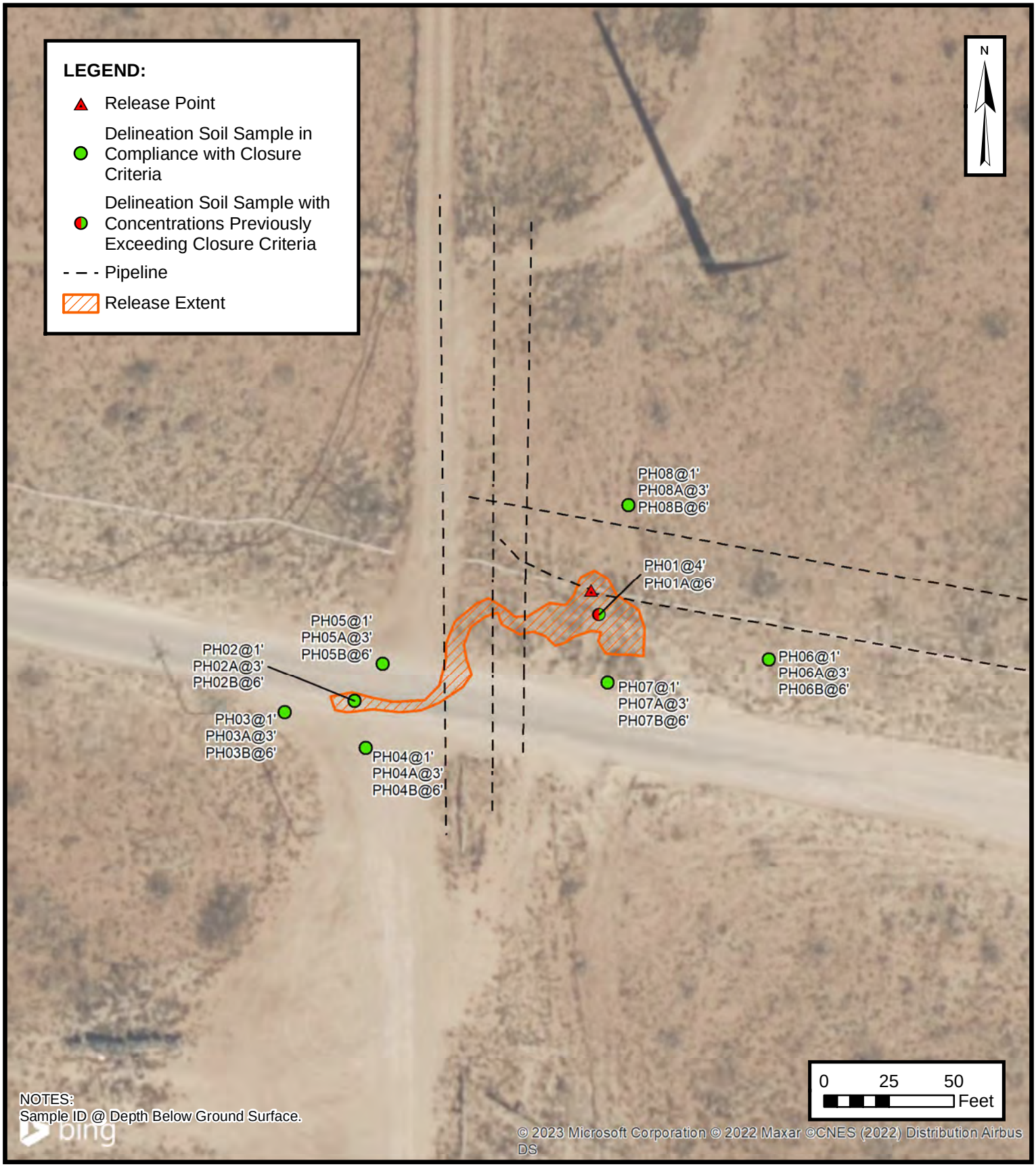
PRELIMINARY SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
HARRIER 35 FEDERAL COM 001H
NAPP2225531487
Unit M Sec 25 T25S R32E
Lea County, New Mexico

FIGURE
2



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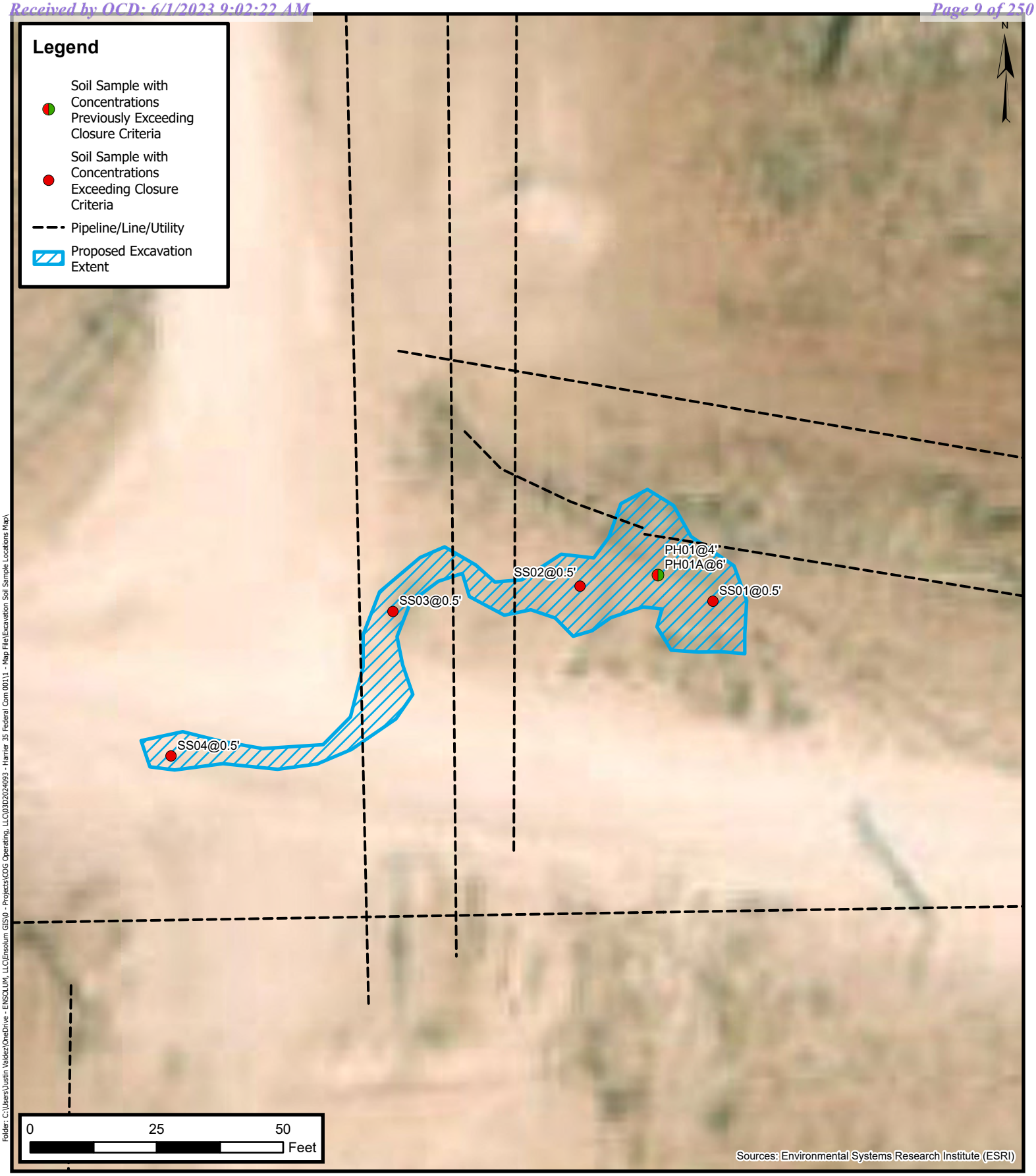
DELINEATION SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
HARRIER 35 FEDERAL COM 001H
NAPP2225531487
Unit M Sec 25 T25S R32E
Lea County, New Mexico

FIGURE
3



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024093 - Harrier 35 Federal Com 001\1 - Map File\Excavation Soil Sample Locations Map\

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Proposed Excavation Extent

COG Operating, LLC
Harrier 35 Federal Com 001
Incident Number: NAPP2225531487
Unit M Sec 25 T25S R32E
Eddy County, New Mexico

FIGURE 4

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Harrier 35 Federal Com 001H
COG Operating, LLC
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Preliminary Soil Samples										
SS01	10/04/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	**28,000***
SS02	10/04/2022	0.5	<0.00198	<0.00396	<49.9	210	199	210	409	**10,300***
SS03	10/04/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	**15,700***
SS04	10/04/2022	0.5	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	**8,500***
SS05	10/04/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	30.9*
SS06	10/04/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	20.3*
SS07	10/04/2022	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	20.2*
SS08	10/04/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	39.7*
Delineation Soil Samples										
PH01	01/19/2023	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	5,400
PH01A	01/19/2023	6	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	162
PH02	01/19/2023	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	93.9*
PH02A	01/19/2023	3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	54.9*
PH02B	01/19/2023	6	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	18.6
PH03	01/19/2023	1	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	<5.02*
PH03A	01/19/2023	3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	77.6*
PH03B	01/19/2023	6	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	50.0
PH04	01/19/2023	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	77.1*
PH04A	01/19/2023	3	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	17.1*
PH04B	01/19/2023	6	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	16.6
PH05	01/19/2023	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	<5.01*
PH05A	01/19/2023	3	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	14.0*
PH05B	01/19/2023	6	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	18.3
PH06	01/19/2023	1	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	<4.96*
PH06A	01/19/2023	3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	52.8*
PH06B	01/19/2023	6	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	7.98

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Harrier 35 Federal Com 001H
COG Operating, LLC
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
PH07	01/19/2023	1	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	21.6*
PH07A	01/19/2023	3	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	112*
PH07B	01/19/2023	6	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	8.03
PH08	01/19/2023	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	<5.05*
PH08A	01/19/2023	3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	32.5*
PH08B	01/19/2023	6	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	105

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
NMAC: New Mexico Administrative Cod
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.
* indicates soil in the top 4 feet to be reclaimed

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon

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APPENDIX A

Referenced Well Records

USGS 320504103261801 25S.33E.31.24232

Lea County, New Mexico
Latitude 32°05'21.6", Longitude 103°36'12.7" NAD83
Land-surface elevation 3,403.00 feet above NGVD29
The depth of the well is 320 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Ogallala Formation (121OGLL) 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
1954-07-26		D	62610		3145.45	NGVD29	1	Z			A
1954-07-26		D	62611		3147.08	NAVD88	1	Z			A
1954-07-26		D	72019	257.55			1	Z			A
1970-12-08		D	62610		3162.86	NGVD29	P	Z			A
1970-12-08		D	62611		3164.49	NAVD88	P	Z			A
1970-12-08		D	72019	240.14			P	Z			A
2013-01-16	19:45 UTC	m	62610		3170.04	NGVD29	1	S	USGS	S	A
2013-01-16	19:45 UTC	m	62611		3171.67	NAVD88	1	S	USGS	S	A
2013-01-16	19:45 UTC	m	72019	232.96			1	S	USGS	S	A

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	Twn	Rng	X	Y
20E6C	C 04537 POD1	4	4	4	31	25S	33E	631847	3550243

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

Driller Name: WALLACE, BRYCE J.LEE.NER

Drill Start Date: 06/11/2021 **Drill Finish Date:** 06/12/2021 **Plug Date:**

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

Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 5 GPM

Casing Size: 4.00 **Depth Well:** 500 feet **Depth Water:** 280 feet

Water Bearing Stratifications:	Top	Bottom	Description
	220	340	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	300	500

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APPENDIX B

Photographic Log

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Photographic Log
COG Operating, LLC
Harrier 35 Federal Com 001H
Incident Number NAPP2225531487

Photograph: 1 Date: 10/4/2022
Description: Soil staining in release footprint
View: Southwest

Photograph: 2 Date: 10/4/2022
Description: Soil staning in release footprint
View: Southeast

Photograph: 3 Date: 10/4/2022
Description: Soil staining in release footprint
View: Southwest

Photograph: 4 Date: 1/19/2023
Description: Delineation activities
View: Southeast

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APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM	Sample Name:PH01	Date:01/19/2023
	Site Name: Harrier 35 Federal Com 001H_093	
	Incident Number: NAPP2225531487	
	Job Number: 03D2024093	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CS	Method: Backhoe
Coordinates:32.0946105, -103.6371206	Hole Diameter: N/A	Total Depth: 6'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
						1		
						2		
						3	CCHE	Excavation at 3-feet, caliche.
D	3421	0.8	N	PH01	4	4	CCHE	Caliche, grey, coarse grained, well graded, no stain, no odor.
						5		
D	<170	0.2	N	PH01A	6	6	CCHE	Caliche, pink and grey, coarse grained, well graded, no stain, no odor.
							TD	Total depth at 6-feet below ground surface.
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name:PH02	Date:01/19/2023
	Site Name: Harrier 35 Federal Com 001H_093	
	Incident Number: NAPP2225531487	
	Job Number: 03D2024093	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CS	Method: Backhoe
Coordinates:32.0946105, -103.6371206	Hole Diameter: N/A	Total Depth: 6'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
N	ND	0.4	N	PH02	1	1	SP-SM	Sand: brown, well graded, medium-coarse grained, no stain, no odor
N	ND	1	N			2	CCHE	Caliche: white, tan, coarse grained, well graded, no stain, no odor
N	ND	0.6	N	PH02	3	3	CCHE	SAA
N	ND	0.7	N			4	CCHE	SAA
						5		
N	ND	0.5	N	PH02	6	6	CCHE	SAA
							TD	Total depth at 6-feet below ground surface.
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name:PH03	Date:01/19/2023
	Site Name: Harrier 35 Federal Com 001H_093	
	Incident Number: NAPP2225531487	
	Job Number: 03D2024093	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CS	Method: Backhoe
Coordinates:32.0946105, -103.6371206	Hole Diameter: N/A	Total Depth: 6'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
N	ND	0.5	N	PH03	1	0		
						1	SP-SM	Sand: brown, well graded, medium-coarse grained, no stain, no odor
						2		
N	ND	1	N	PH03	3	3	CCHE	Caliche: grey, coarse grained, well graded, no stain, no odor
						4		
						5		
N	ND	0.5	N	PH03	6	6	CCHE	SAA
							TD	Total depth at 6-feet below ground surface.
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name:PH04	Date:01/19/2023
	Site Name: Harrier 35 Federal Com 001H_093	
	Incident Number: NAPP2225531487	
	Job Number: 03D2024093	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CS	Method: Backhoe
Coordinates:32.0946105, -103.6371206	Hole Diameter: N/A	Total Depth: 6'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
N	ND	0.3	N	PH04	1	0	SP-SM	Sand: brown, well graded, medium-coarse grained, no stain, no odor
N	ND	1.3	N	PH04	3	3	CCHE	Caliche: grey, coarse grained, well graded, no stain, no odor
N	ND	1.3	N	PH04	6	6	CCHE	SAA
							TD	Total depth at 6-feet below ground surface.

ENSOLUM	Sample Name:PH05	Date:01/19/2023
	Site Name: Harrier 35 Federal Com 001H_093	
	Incident Number: NAPP2225531487	
	Job Number: 03D2024093	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CS	Method: Backhoe
Coordinates:32.0946105, -103.6371206	Hole Diameter: N/A	Total Depth: 6'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
N	ND	0.5	N	PH05	1	0		
						1	SP-SM	Sand: brown, well graded, medium-coarse grained, no stain, no odor
						2		
N	ND	0.4	N	PH05	3	3	CCHE	Caliche: grey, coarse grained, well graded, no stain, no odor
						4		
						5		
N	ND	0.4	N	PH05	6	6	CCHE	SAA
							TD	Total depth at 6-feet below ground surface.
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name:PH06	Date:01/19/2023
	Site Name: Harrier 35 Federal Com 001H_093	
	Incident Number: NAPP2225531487	
	Job Number: 03D2024093	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CS	Method: Backhoe
Coordinates:32.0946105, -103.6371206	Hole Diameter: N/A	Total Depth: 6'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
N	ND	0.2	N	PH06	1	0		
						1	SP-SM	Sand: brown, well graded, medium-coarse grained, no stain, no odor
						2		
N	ND	0.8	N	PH06	3	3	CCHE	Caliche: grey, coarse grained, well graded, no stain, no odor
						4		
						5		
N	ND	0.5	N	PH06	6	6	CCHE	SAA
							TD	Total depth at 6-feet below ground surface.
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name:PH07	Date:01/19/2023
	Site Name: Harrier 35 Federal Com 001H_093	
	Incident Number: NAPP2225531487	
	Job Number: 03D2024093	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CS	Method: Backhoe
Coordinates:32.0946105, -103.6371206	Hole Diameter: N/A	Total Depth: 6'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
N	ND	0.3	N	PH07	1	0		
						1	SP-SM	Sand: brown, well graded, medium-coarse grained, no stain, no odor
						2		
N	ND	1	N	PH07	3	3	CCHE	Caliche: grey, coarse grained, well graded, no stain, no odor
						4		
						5		
N	ND	0.8	N	PH07	6	6	CCHE	SAA
							TD	Total depth at 6-feet below ground surface.
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name:PH08	Date:01/19/2023
	Site Name: Harrier 35 Federal Com 001H_093	
	Incident Number: NAPP2225531487	
	Job Number: 03D2024093	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CS	Method: Backhoe
Coordinates:32.0946105, -103.6371206	Hole Diameter: N/A	Total Depth: 6'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
N	ND	0.7	N	PH08	1	0		
						1	SP-SM	Sand: brown, well graded, medium-coarse grained, no stain, no odor
						2		
N	ND	0.5	N	PH08	3	3	CCHE	Caliche: grey, coarse grained, well graded, no stain, no odor
						4		
						5		
N	ND	0.4	N	PH08	6	6	CCHE	SAA
							TD	Total depth at 6-feet below ground surface.
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3147-1
Laboratory Sample Delivery Group: 03D2024093
Client Project/Site: Harrier 35 Fed Com 001

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
10/12/2022 12:37:53 PM

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

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

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

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Laboratory Job ID: 890-3147-1
SDG: 03D2024093

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
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: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Job ID: 890-3147-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3147-1

Receipt
The samples were received on 10/5/2022 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-3147-1), SS02 (890-3147-2), SS03 (890-3147-3), SS04 (890-3147-4), SS05 (890-3147-5), SS06 (890-3147-6), SS07 (890-3147-7) and SS08 (890-3147-8).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: SS06 (890-3147-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS08 (890-3147-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
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 880-36242 and analytical batch 880-36598 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: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Client Sample ID: SS01

Lab Sample ID: 890-3147-1
Matrix: Solid
Date Collected: 10/04/22 08:40
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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		10/10/22 13:48	10/11/22 21:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 21:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 21:44	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/10/22 13:48	10/11/22 21:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 21:44	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/10/22 13:48	10/11/22 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*10/10/22 13:48*	*10/11/22 21:44*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*10/10/22 13:48*	*10/11/22 21:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			10/12/22 11:46	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			10/07/22 09:09	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		10/06/22 08:40	10/06/22 15:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 15:11	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 15:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*10/06/22 08:40*	*10/06/22 15:11*	*1*
o-Terphenyl	*78*		*70 - 130*	*10/06/22 08:40*	*10/06/22 15:11*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**28000**		248		mg/Kg			10/11/22 08:59	50

Client Sample ID: SS02

Lab Sample ID: 890-3147-2
Matrix: Solid
Date Collected: 10/04/22 08:45
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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		10/10/22 13:48	10/11/22 22:05	1
Toluene	<0.00198	U	0.00198		mg/Kg		10/10/22 13:48	10/11/22 22:05	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		10/10/22 13:48	10/11/22 22:05	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		10/10/22 13:48	10/11/22 22:05	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		10/10/22 13:48	10/11/22 22:05	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		10/10/22 13:48	10/11/22 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*10/10/22 13:48*	*10/11/22 22:05*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Client Sample ID: SS02

Lab Sample ID: 890-3147-2
Matrix: Solid
Date Collected: 10/04/22 08:45
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*10/10/22 13:48*	*10/11/22 22:05*	*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			10/12/22 11:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**409**		49.9	mg/Kg			10/07/22 09:09	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		10/06/22 08:40	10/06/22 15:32	1
Diesel Range Organics (Over C10-C28)	**210**		49.9	mg/Kg		10/06/22 08:40	10/06/22 15:32	1
OII Range Organics (Over C28-C36)	**199**		49.9	mg/Kg		10/06/22 08:40	10/06/22 15:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*10/06/22 08:40*	*10/06/22 15:32*	*1*
o-Terphenyl	*75*		*70 - 130*	*10/06/22 08:40*	*10/06/22 15:32*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10300**		100	mg/Kg			10/11/22 09:06	20

Client Sample ID: SS03

Lab Sample ID: 890-3147-3
Matrix: Solid
Date Collected: 10/04/22 08:50
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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		10/10/22 13:48	10/11/22 22:25	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/10/22 13:48	10/11/22 22:25	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/10/22 13:48	10/11/22 22:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/10/22 13:48	10/11/22 22:25	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/10/22 13:48	10/11/22 22:25	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/10/22 13:48	10/11/22 22:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*10/10/22 13:48*	*10/11/22 22:25*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*10/10/22 13:48*	*10/11/22 22:25*	*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			10/12/22 11:46	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			10/07/22 09:09	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Client Sample ID: SS03

Lab Sample ID: 890-3147-3
Matrix: Solid
Date Collected: 10/04/22 08:50
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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		10/06/22 08:40	10/06/22 15:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 15:53	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 15:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*10/06/22 08:40*	*10/06/22 15:53*	*1*
o-Terphenyl	*78*		*70 - 130*	*10/06/22 08:40*	*10/06/22 15:53*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15700**		101		mg/Kg			10/11/22 09:14	20

Client Sample ID: SS04

Lab Sample ID: 890-3147-4
Matrix: Solid
Date Collected: 10/04/22 08:55
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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		10/10/22 13:48	10/11/22 22:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 22:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 22:46	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/10/22 13:48	10/11/22 22:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 22:46	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/10/22 13:48	10/11/22 22:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*10/10/22 13:48*	*10/11/22 22:46*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*10/10/22 13:48*	*10/11/22 22:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/12/22 11:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/07/22 09:09	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	<49.8	U	49.8		mg/Kg		10/06/22 08:40	10/06/22 16:14	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/06/22 08:40	10/06/22 16:14	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/06/22 08:40	10/06/22 16:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*10/06/22 08:40*	*10/06/22 16:14*	*1*
o-Terphenyl	*76*		*70 - 130*	*10/06/22 08:40*	*10/06/22 16:14*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Client Sample ID: SS04

Lab Sample ID: 890-3147-4
Matrix: Solid
Date Collected: 10/04/22 08:55
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8500**	**F1**	100		mg/Kg			10/11/22 09:22	20

Client Sample ID: SS05

Lab Sample ID: 890-3147-5
Matrix: Solid
Date Collected: 10/04/22 09:00
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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		10/10/22 13:48	10/11/22 23:07	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:48	10/11/22 23:07	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:48	10/11/22 23:07	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/10/22 13:48	10/11/22 23:07	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:48	10/11/22 23:07	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/10/22 13:48	10/11/22 23:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*10/10/22 13:48*	*10/11/22 23:07*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*10/10/22 13:48*	*10/11/22 23:07*	*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			10/12/22 11:46	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			10/07/22 09:09	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		10/06/22 08:40	10/06/22 16:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/06/22 08:40	10/06/22 16:34	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/06/22 08:40	10/06/22 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*10/06/22 08:40*	*10/06/22 16:34*	*1*
o-Terphenyl	*77*		*70 - 130*	*10/06/22 08:40*	*10/06/22 16:34*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30.9**		4.96		mg/Kg			10/11/22 09:45	1

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Client Sample ID: SS06

Lab Sample ID: 890-3147-6
Matrix: Solid
Date Collected: 10/04/22 09:05
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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		10/10/22 13:48	10/11/22 23:28	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:48	10/11/22 23:28	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:48	10/11/22 23:28	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/10/22 13:48	10/11/22 23:28	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:48	10/11/22 23:28	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/10/22 13:48	10/11/22 23:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*10/10/22 13:48*	*10/11/22 23:28*	*1*
1,4-Difluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*10/10/22 13:48*	*10/11/22 23:28*	*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			10/12/22 11:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/07/22 09:09	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	<49.8	U	49.8		mg/Kg		10/06/22 08:40	10/06/22 16:55	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/06/22 08:40	10/06/22 16:55	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/06/22 08:40	10/06/22 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*10/06/22 08:40*	*10/06/22 16:55*	*1*
o-Terphenyl	*78*		*70 - 130*	*10/06/22 08:40*	*10/06/22 16:55*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.3**		4.97		mg/Kg			10/11/22 09:52	1

Client Sample ID: SS07

Lab Sample ID: 890-3147-7
Matrix: Solid
Date Collected: 10/04/22 09:10
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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		10/10/22 13:48	10/11/22 23:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 23:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 23:48	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/10/22 13:48	10/11/22 23:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 23:48	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/10/22 13:48	10/11/22 23:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*10/10/22 13:48*	*10/11/22 23:48*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Client Sample ID: SS07

Lab Sample ID: 890-3147-7
Matrix: Solid
Date Collected: 10/04/22 09:10
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*10/10/22 13:48*	*10/11/22 23:48*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			10/12/22 11:46	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			10/07/22 09:09	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		10/06/22 08:40	10/06/22 17:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/06/22 08:40	10/06/22 17:16	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/06/22 08:40	10/06/22 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*86*		*70 - 130*	*10/06/22 08:40*	*10/06/22 17:16*	*1*
o-Terphenyl	*82*		*70 - 130*	*10/06/22 08:40*	*10/06/22 17:16*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.2**		4.98	mg/Kg			10/11/22 10:16	1

Client Sample ID: SS08

Lab Sample ID: 890-3147-8
Matrix: Solid
Date Collected: 10/04/22 09:15
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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		10/10/22 13:48	10/12/22 00:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/10/22 13:48	10/12/22 00:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/10/22 13:48	10/12/22 00:09	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		10/10/22 13:48	10/12/22 00:09	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/10/22 13:48	10/12/22 00:09	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		10/10/22 13:48	10/12/22 00:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*10/10/22 13:48*	*10/12/22 00:09*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*10/10/22 13:48*	*10/12/22 00:09*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/12/22 11:46	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			10/07/22 09:09	1

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Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Client Sample ID: SS08

Lab Sample ID: 890-3147-8
Date Collected: 10/04/22 09:15
Matrix: Solid
Date Received: 10/05/22 09:10
Sample Depth: 0.5'

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		10/06/22 08:40	10/06/22 17:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 17:36	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 08:40	10/06/22 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*10/06/22 08:40*	*10/06/22 17:36*	*1*
o-Terphenyl	*80*		*70 - 130*	*10/06/22 08:40*	*10/06/22 17:36*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**39.7**		4.99		mg/Kg			10/11/22 10:23	1

Surrogate Summary

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3147-1	SS01	105	88
890-3147-1 MS	SS01	94	97
890-3147-1 MSD	SS01	94	93
890-3147-2	SS02	103	97
890-3147-3	SS03	114	99
890-3147-4	SS04	114	100
890-3147-5	SS05	115	98
890-3147-6	SS06	104	65 S1-
890-3147-7	SS07	126	89
890-3147-8	SS08	133 S1+	83
LCS 880-36590/1-A	Lab Control Sample	89	92
LCSD 880-36590/2-A	Lab Control Sample Dup	89	92
MB 880-36590/5-A	Method Blank	98	82
MB 880-36628/5-A	Method Blank	106	84

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 (70-130)	OTPH1 (70-130)
880-20033-A-1-C MS	Matrix Spike	94	85
880-20033-A-1-D MSD	Matrix Spike Duplicate	82	71
890-3147-1	SS01	84	78
890-3147-2	SS02	84	75
890-3147-3	SS03	87	78
890-3147-4	SS04	86	76
890-3147-5	SS05	82	77
890-3147-6	SS06	86	78
890-3147-7	SS07	86	82
890-3147-8	SS08	88	80
LCS 880-36226/2-A	Lab Control Sample	108	110
LCSD 880-36226/3-A	Lab Control Sample Dup	116	120
MB 880-36226/1-A	Method Blank	90	93

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-36590/5-A
Matrix: Solid
Analysis Batch: 36625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36590

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 21:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 21:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 21:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/10/22 13:48	10/11/22 21:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:48	10/11/22 21:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/10/22 13:48	10/11/22 21:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*10/10/22 13:48*	*10/11/22 21:22*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*10/10/22 13:48*	*10/11/22 21:22*	*1*

Lab Sample ID: LCS 880-36590/1-A
Matrix: Solid
Analysis Batch: 36625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36590

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09596		mg/Kg		96	70 - 130		
Toluene			0.100	0.09632		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.08819		mg/Kg		88	70 - 130		
m-Xylene & p-Xylene			0.200	0.1845		mg/Kg		92	70 - 130		
o-Xylene			0.100	0.09352		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 880-36590/2-A
Matrix: Solid
Analysis Batch: 36625

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36590

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1054		mg/Kg		105	70 - 130	9	35
Toluene			0.100	0.1064		mg/Kg		106	70 - 130	10	35
Ethylbenzene			0.100	0.09629		mg/Kg		96	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.1995		mg/Kg		100	70 - 130	8	35
o-Xylene			0.100	0.09993		mg/Kg		100	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-3147-1 MS
Matrix: Solid
Analysis Batch: 36625

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 36590

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.1006		mg/Kg		101	70 - 130		
Toluene	<0.00200	U	0.0998	0.09590		mg/Kg		95	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

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

Lab Sample ID: 890-3147-1 MS
Matrix: Solid
Analysis Batch: 36625

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 36590

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0998	0.08125		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1643		mg/Kg		82	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08297		mg/Kg		83	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 890-3147-1 MSD
Matrix: Solid
Analysis Batch: 36625

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 36590

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.1022		mg/Kg		103	70 - 130	2	35
Toluene	<0.00200	U	0.0996	0.1003		mg/Kg		99	70 - 130	5	35
Ethylbenzene	<0.00200	U	0.0996	0.08603		mg/Kg		86	70 - 130	6	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1774		mg/Kg		89	70 - 130	8	35
o-Xylene	<0.00200	U	0.0996	0.08805		mg/Kg		88	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: MB 880-36628/5-A
Matrix: Solid
Analysis Batch: 36625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36628

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/11/22 08:09	10/11/22 10:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/11/22 08:09	10/11/22 10:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/11/22 08:09	10/11/22 10:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/11/22 08:09	10/11/22 10:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/11/22 08:09	10/11/22 10:38	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/11/22 08:09	10/11/22 10:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*10/11/22 08:09*	*10/11/22 10:38*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*10/11/22 08:09*	*10/11/22 10:38*	*1*

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

Lab Sample ID: MB 880-36226/1-A
Matrix: Solid
Analysis Batch: 36216

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

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		10/06/22 08:40	10/06/22 09:43	1

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

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

Lab Sample ID: MB 880-36226/1-A
Matrix: Solid
Analysis Batch: 36216

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

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

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

Lab Sample ID: LCS 880-36226/2-A
Matrix: Solid
Analysis Batch: 36216

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36226

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: LCSD 880-36226/3-A
Matrix: Solid
Analysis Batch: 36216

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36226

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

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

Lab Sample ID: 880-20033-A-1-C MS
Matrix: Solid
Analysis Batch: 36216

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 36226

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	955.9		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)	101		998	922.3		mg/Kg		82	70 - 130		

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

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

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

Lab Sample ID: 880-20033-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 36216 — **Prep Batch: 36226**

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	999	892.0		mg/Kg		86	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	101		999	803.4		mg/Kg		70	70 - 130	14	20

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-36242/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 36598

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/11/22 07:11	1

Lab Sample ID: LCS 880-36242/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 36598

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	260.6		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-36242/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 36598

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	260.8		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 890-3147-4 MS — **Client Sample ID: SS04**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 36598

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	8500	F1	5000	18090	F1	mg/Kg		192	90 - 110		

Lab Sample ID: 890-3147-4 MSD — **Client Sample ID: SS04**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 36598

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	8500	F1	5000	17000	F1	mg/Kg		170	90 - 110	6	20

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

GC VOA

Prep Batch: 36590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3147-1	SS01	Total/NA	Solid	5035	
890-3147-2	SS02	Total/NA	Solid	5035	
890-3147-3	SS03	Total/NA	Solid	5035	
890-3147-4	SS04	Total/NA	Solid	5035	
890-3147-5	SS05	Total/NA	Solid	5035	
890-3147-6	SS06	Total/NA	Solid	5035	
890-3147-7	SS07	Total/NA	Solid	5035	
890-3147-8	SS08	Total/NA	Solid	5035	
MB 880-36590/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36590/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36590/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3147-1 MS	SS01	Total/NA	Solid	5035	
890-3147-1 MSD	SS01	Total/NA	Solid	5035	

Analysis Batch: 36625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3147-1	SS01	Total/NA	Solid	8021B	36590
890-3147-2	SS02	Total/NA	Solid	8021B	36590
890-3147-3	SS03	Total/NA	Solid	8021B	36590
890-3147-4	SS04	Total/NA	Solid	8021B	36590
890-3147-5	SS05	Total/NA	Solid	8021B	36590
890-3147-6	SS06	Total/NA	Solid	8021B	36590
890-3147-7	SS07	Total/NA	Solid	8021B	36590
890-3147-8	SS08	Total/NA	Solid	8021B	36590
MB 880-36590/5-A	Method Blank	Total/NA	Solid	8021B	36590
MB 880-36628/5-A	Method Blank	Total/NA	Solid	8021B	36628
LCS 880-36590/1-A	Lab Control Sample	Total/NA	Solid	8021B	36590
LCSD 880-36590/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36590
890-3147-1 MS	SS01	Total/NA	Solid	8021B	36590
890-3147-1 MSD	SS01	Total/NA	Solid	8021B	36590

Prep Batch: 36628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-36628/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 36757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3147-1	SS01	Total/NA	Solid	Total BTEX	
890-3147-2	SS02	Total/NA	Solid	Total BTEX	
890-3147-3	SS03	Total/NA	Solid	Total BTEX	
890-3147-4	SS04	Total/NA	Solid	Total BTEX	
890-3147-5	SS05	Total/NA	Solid	Total BTEX	
890-3147-6	SS06	Total/NA	Solid	Total BTEX	
890-3147-7	SS07	Total/NA	Solid	Total BTEX	
890-3147-8	SS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 36216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3147-1	SS01	Total/NA	Solid	8015B NM	36226

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

GC Semi VOA (Continued)

Analysis Batch: 36216 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3147-2	SS02	Total/NA	Solid	8015B NM	36226
890-3147-3	SS03	Total/NA	Solid	8015B NM	36226
890-3147-4	SS04	Total/NA	Solid	8015B NM	36226
890-3147-5	SS05	Total/NA	Solid	8015B NM	36226
890-3147-6	SS06	Total/NA	Solid	8015B NM	36226
890-3147-7	SS07	Total/NA	Solid	8015B NM	36226
890-3147-8	SS08	Total/NA	Solid	8015B NM	36226
MB 880-36226/1-A	Method Blank	Total/NA	Solid	8015B NM	36226
LCS 880-36226/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	36226
LCSD 880-36226/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	36226
880-20033-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	36226
880-20033-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	36226

Prep Batch: 36226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3147-1	SS01	Total/NA	Solid	8015NM Prep	
890-3147-2	SS02	Total/NA	Solid	8015NM Prep	
890-3147-3	SS03	Total/NA	Solid	8015NM Prep	
890-3147-4	SS04	Total/NA	Solid	8015NM Prep	
890-3147-5	SS05	Total/NA	Solid	8015NM Prep	
890-3147-6	SS06	Total/NA	Solid	8015NM Prep	
890-3147-7	SS07	Total/NA	Solid	8015NM Prep	
890-3147-8	SS08	Total/NA	Solid	8015NM Prep	
MB 880-36226/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-36226/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-36226/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-20033-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-20033-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 36332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3147-1	SS01	Total/NA	Solid	8015 NM	
890-3147-2	SS02	Total/NA	Solid	8015 NM	
890-3147-3	SS03	Total/NA	Solid	8015 NM	
890-3147-4	SS04	Total/NA	Solid	8015 NM	
890-3147-5	SS05	Total/NA	Solid	8015 NM	
890-3147-6	SS06	Total/NA	Solid	8015 NM	
890-3147-7	SS07	Total/NA	Solid	8015 NM	
890-3147-8	SS08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 36242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3147-1	SS01	Soluble	Solid	DI Leach	
890-3147-2	SS02	Soluble	Solid	DI Leach	
890-3147-3	SS03	Soluble	Solid	DI Leach	
890-3147-4	SS04	Soluble	Solid	DI Leach	
890-3147-5	SS05	Soluble	Solid	DI Leach	
890-3147-6	SS06	Soluble	Solid	DI Leach	
890-3147-7	SS07	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

HPLC/IC (Continued)

Leach Batch: 36242 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3147-8	SS08	Soluble	Solid	DI Leach	
MB 880-36242/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-36242/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-36242/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3147-4 MS	SS04	Soluble	Solid	DI Leach	
890-3147-4 MSD	SS04	Soluble	Solid	DI Leach	

Analysis Batch: 36598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3147-1	SS01	Soluble	Solid	300.0	36242
890-3147-2	SS02	Soluble	Solid	300.0	36242
890-3147-3	SS03	Soluble	Solid	300.0	36242
890-3147-4	SS04	Soluble	Solid	300.0	36242
890-3147-5	SS05	Soluble	Solid	300.0	36242
890-3147-6	SS06	Soluble	Solid	300.0	36242
890-3147-7	SS07	Soluble	Solid	300.0	36242
890-3147-8	SS08	Soluble	Solid	300.0	36242
MB 880-36242/1-A	Method Blank	Soluble	Solid	300.0	36242
LCS 880-36242/2-A	Lab Control Sample	Soluble	Solid	300.0	36242
LCSD 880-36242/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	36242
890-3147-4 MS	SS04	Soluble	Solid	300.0	36242
890-3147-4 MSD	SS04	Soluble	Solid	300.0	36242

Lab Chronicle

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Client Sample ID: SS01
Date Collected: 10/04/22 08:40
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3147-1
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			4.99 g	5 mL	36590	10/10/22 13:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36625	10/11/22 21:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36757	10/12/22 11:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			36332	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 15:11	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	36242	10/06/22 09:53	CH	EET MID
Soluble	Analysis	300.0		50			36598	10/11/22 08:59	CH	EET MID

Client Sample ID: SS02
Date Collected: 10/04/22 08:45
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3147-2
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			5.05 g	5 mL	36590	10/10/22 13:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36625	10/11/22 22:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36757	10/12/22 11:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			36332	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 15:32	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36242	10/06/22 09:53	CH	EET MID
Soluble	Analysis	300.0		20			36598	10/11/22 09:06	CH	EET MID

Client Sample ID: SS03
Date Collected: 10/04/22 08:50
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3147-3
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			5.03 g	5 mL	36590	10/10/22 13:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36625	10/11/22 22:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36757	10/12/22 11:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			36332	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 15:53	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	36242	10/06/22 09:53	CH	EET MID
Soluble	Analysis	300.0		20			36598	10/11/22 09:14	CH	EET MID

Client Sample ID: SS04
Date Collected: 10/04/22 08:55
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3147-4
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			5.01 g	5 mL	36590	10/10/22 13:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36625	10/11/22 22:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36757	10/12/22 11:46	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Client Sample ID: SS04
Date Collected: 10/04/22 08:55
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3147-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			36332	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 16:14	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36242	10/06/22 09:53	CH	EET MID
Soluble	Analysis	300.0		20			36598	10/11/22 09:22	CH	EET MID

Client Sample ID: SS05
Date Collected: 10/04/22 09:00
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3147-5
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	36590	10/10/22 13:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36625	10/11/22 23:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36757	10/12/22 11:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			36332	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 16:34	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	36242	10/06/22 09:53	CH	EET MID
Soluble	Analysis	300.0		1			36598	10/11/22 09:45	CH	EET MID

Client Sample ID: SS06
Date Collected: 10/04/22 09:05
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3147-6
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			4.97 g	5 mL	36590	10/10/22 13:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36625	10/11/22 23:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36757	10/12/22 11:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			36332	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 16:55	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	36242	10/06/22 09:53	CH	EET MID
Soluble	Analysis	300.0		1			36598	10/11/22 09:52	CH	EET MID

Client Sample ID: SS07
Date Collected: 10/04/22 09:10
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3147-7
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			4.99 g	5 mL	36590	10/10/22 13:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36625	10/11/22 23:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36757	10/12/22 11:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			36332	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 17:16	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Client Sample ID: SS07

Lab Sample ID: 890-3147-7

Date Collected: 10/04/22 09:10
Matrix: Solid
Date Received: 10/05/22 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	36242	10/06/22 09:53	CH	EET MID
Soluble	Analysis	300.0		1			36598	10/11/22 10:16	CH	EET MID

Client Sample ID: SS08

Lab Sample ID: 890-3147-8

Date Collected: 10/04/22 09:15
Matrix: Solid
Date Received: 10/05/22 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	36590	10/10/22 13:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36625	10/12/22 00:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36757	10/12/22 11:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			36332	10/07/22 09:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	36226	10/06/22 08:40	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36216	10/06/22 17:36	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	36242	10/06/22 09:53	CH	EET MID
Soluble	Analysis	300.0		1			36598	10/11/22 10:23	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: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

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	T104704400-22-24	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

Method Summary

Client: Ensolum
Project/Site: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

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: Harrier 35 Fed Com 001

Job ID: 890-3147-1
SDG: 03D2024093

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3147-1	SS01	Solid	10/04/22 08:40	10/05/22 09:10	0.5'
890-3147-2	SS02	Solid	10/04/22 08:45	10/05/22 09:10	0.5'
890-3147-3	SS03	Solid	10/04/22 08:50	10/05/22 09:10	0.5'
890-3147-4	SS04	Solid	10/04/22 08:55	10/05/22 09:10	0.5'
890-3147-5	SS05	Solid	10/04/22 09:00	10/05/22 09:10	0.5'
890-3147-6	SS06	Solid	10/04/22 09:05	10/05/22 09:10	0.5'
890-3147-7	SS07	Solid	10/04/22 09:10	10/05/22 09:10	0.5'
890-3147-8	SS08	Solid	10/04/22 09:15	10/05/22 09:10	0.5'

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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 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum	Company Name:	
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	303-887-2946	Email:	kjennings@ensolum.com

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:	Harrier 35 Fed Com 001	**Turn Around**	
Project Number:	03D2024093	☑ Routine ☐ Rush	
Project Location:	32.0947, -103.63701	Due Date:	
Sampler's Name:	Kase Parker	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TAM-00	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.8	
Total Containers:		Corrected Temperature:	1.6	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
SS01	S	10/4/2022	8:40	0.5'	G	1		x	x	x
SS02	S	10/4/2022	8:45	0.5'	G	1		x	x	x
SS03	S	10/4/2022	8:50	0.5'	G	1		x	x	x
SS04	S	10/4/2022	8:55	0.5'	G	1		x	x	x
SS05	S	10/4/2022	9:00	0.5'	G	1		x	x	x
SS06	S	10/4/2022	9:05	0.5'	G	1		x	x	x
SS07	S	10/4/2022	9:10	0.5'	G	1		x	x	x
SS08	S	10/4/2022	9:15	0.5'	G	1		x	x	x

Parameters

890-3147 Chain of Custody

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Incident ID:

Cost Center:

AFE:

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		Amanda Estep	10/5/22 0900			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3147-1
SDG Number: 03D2024093

Login Number: 3147
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3147-1
SDG Number: 03D2024093

Login Number: 3147
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 10/06/22 10:20 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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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/3/2023 11:14:35 AM

JOB DESCRIPTION

Harrier 35 Federal Com 001H
SDG NUMBER Lea County NM

JOB NUMBER

890-3906-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

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
2/3/2023 11:14:35 AM

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

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Laboratory Job ID: 890-3906-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
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: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

Job ID: 890-3906-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3906-1

Receipt
The samples were received on 1/20/2023 9:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3906-1) and PH01 (890-3906-2).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-44738 and analytical batch 880-44986 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

GC Semi VOA
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 880-44761 and analytical batch 880-44876 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: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

Client Sample ID: PH01

Lab Sample ID: 890-3906-1
Matrix: Solid
Date Collected: 01/19/23 09:10
Date Received: 01/20/23 09:06
Sample Depth: 4'

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		01/25/23 14:56	01/30/23 18:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/25/23 14:56	01/30/23 18:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/25/23 14:56	01/30/23 18:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/25/23 14:56	01/30/23 18:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/25/23 14:56	01/30/23 18:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/25/23 14:56	01/30/23 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*01/25/23 14:56*	*01/30/23 18:38*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*01/25/23 14:56*	*01/30/23 18:38*	*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			01/31/23 13:40	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			02/03/23 11:29	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		02/01/23 13:08	02/03/23 03:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/03/23 03:04	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/03/23 03:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*02/01/23 13:08*	*02/03/23 03:04*	*1*
o-Terphenyl	*107*		*70 - 130*	*02/01/23 13:08*	*02/03/23 03:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5400**		50.0		mg/Kg			01/26/23 22:16	10

Client Sample ID: PH01

Lab Sample ID: 890-3906-2
Matrix: Solid
Date Collected: 01/19/23 09:20
Date Received: 01/20/23 09:06
Sample Depth: 6'

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		01/25/23 14:56	01/30/23 18:58	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/25/23 14:56	01/30/23 18:58	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/25/23 14:56	01/30/23 18:58	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/25/23 14:56	01/30/23 18:58	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/25/23 14:56	01/30/23 18:58	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/25/23 14:56	01/30/23 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*01/25/23 14:56*	*01/30/23 18:58*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

Client Sample ID: PH01

Date Collected: 01/19/23 09:20
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3906-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*01/25/23 14:56*	*01/30/23 18:58*	*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			01/31/23 13:40	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			02/03/23 11:29	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		02/01/23 13:08	02/03/23 03:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/01/23 13:08	02/03/23 03:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/01/23 13:08	02/03/23 03:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*02/01/23 13:08*	*02/03/23 03:26*	*1*
o-Terphenyl	*101*		*70 - 130*	*02/01/23 13:08*	*02/03/23 03:26*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**162**		24.8		mg/Kg			01/30/23 17:17	5

Surrogate Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3893-A-1-D MS	Matrix Spike	85	104
890-3893-A-1-E MSD	Matrix Spike Duplicate	100	106
890-3906-1	PH01	112	113
890-3906-2	PH01	111	104
LCS 880-44738/1-A	Lab Control Sample	83	95
LCSD 880-44738/2-A	Lab Control Sample Dup	81	102
MB 880-44738/5-A	Method Blank	88	87

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 (70-130)	OTPH1 (70-130)
880-23972-A-21-H MS	Matrix Spike	91	88
880-23972-A-21-I MSD	Matrix Spike Duplicate	86	82
890-3906-1	PH01	104	107
890-3906-2	PH01	103	101
LCS 880-45211/2-A	Lab Control Sample	111	100
LCSD 880-45211/3-A	Lab Control Sample Dup	115	105
MB 880-45211/1-A	Method Blank	124	130

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-44738/5-A
Matrix: Solid
Analysis Batch: 44986

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44738

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/25/23 14:56	01/30/23 12:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/25/23 14:56	01/30/23 12:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/25/23 14:56	01/30/23 12:57	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/25/23 14:56	01/30/23 12:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/25/23 14:56	01/30/23 12:57	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/25/23 14:56	01/30/23 12:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*01/25/23 14:56*	*01/30/23 12:57*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*01/25/23 14:56*	*01/30/23 12:57*	*1*

Lab Sample ID: LCS 880-44738/1-A
Matrix: Solid
Analysis Batch: 44986

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44738

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09573		mg/Kg		96	70 - 130		
Toluene			0.100	0.08955		mg/Kg		90	70 - 130		
Ethylbenzene			0.100	0.08015		mg/Kg		80	70 - 130		
m-Xylene & p-Xylene			0.200	0.1604		mg/Kg		80	70 - 130		
o-Xylene			0.100	0.08030		mg/Kg		80	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-44738/2-A
Matrix: Solid
Analysis Batch: 44986

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44738

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1013		mg/Kg		101	70 - 130	6	35
Toluene			0.100	0.09557		mg/Kg		96	70 - 130	7	35
Ethylbenzene			0.100	0.08178		mg/Kg		82	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1637		mg/Kg		82	70 - 130	2	35
o-Xylene			0.100	0.08042		mg/Kg		80	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-3893-A-1-D MS
Matrix: Solid
Analysis Batch: 44986

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44738

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0998	0.09358		mg/Kg		94	70 - 130		
Toluene	<0.00198	U	0.0998	0.07247		mg/Kg		73	70 - 130		

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

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

Lab Sample ID: 890-3893-A-1-D MS
Matrix: Solid
Analysis Batch: 44986

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44738

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U F1	0.0998	0.06098	F1	mg/Kg		61	70 - 130
m-Xylene & p-Xylene	<0.00396	U F1	0.200	0.1276	F1	mg/Kg		64	70 - 130
o-Xylene	<0.00198	U F1	0.0998	0.06433	F1	mg/Kg		64	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-3893-A-1-E MSD
Matrix: Solid
Analysis Batch: 44986

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44738

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.101	0.09618		mg/Kg		95	70 - 130	3	35
Toluene	<0.00198	U	0.101	0.07154		mg/Kg		71	70 - 130	1	35
Ethylbenzene	<0.00198	U F1	0.101	0.05892	F1	mg/Kg		58	70 - 130	3	35
m-Xylene & p-Xylene	<0.00396	U F1	0.202	0.1264	F1	mg/Kg		63	70 - 130	1	35
o-Xylene	<0.00198	U F1	0.101	0.06549	F1	mg/Kg		64	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

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

Lab Sample ID: MB 880-45211/1-A
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45211

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/02/23 20:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/02/23 20:18	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/02/23 20:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*02/01/23 13:08*	*02/02/23 20:18*	*1*
o-Terphenyl	*130*		*70 - 130*	*02/01/23 13:08*	*02/02/23 20:18*	*1*

Lab Sample ID: LCS 880-45211/2-A
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45211

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			999	840.3		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)			999	922.3		mg/Kg		92	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

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

Lab Sample ID: LCS 880-45211/2-A
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45211

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: LCSD 880-45211/3-A
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45211

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			999	848.1		mg/Kg		85	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			999	939.0		mg/Kg		94	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: 880-23972-A-21-H MS
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45211

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1158		mg/Kg		112	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1015		mg/Kg		102	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: 880-23972-A-21-I MSD
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45211

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	998	1061		mg/Kg		102	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	955.2		mg/Kg		96	70 - 130	6	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	82		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44761/1-A
Matrix: Solid
Analysis Batch: 44876

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			01/26/23 20:56	1

Lab Sample ID: LCS 880-44761/2-A
Matrix: Solid
Analysis Batch: 44876

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	265.0		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-44761/3-A
Matrix: Solid
Analysis Batch: 44876

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	274.4		mg/Kg		110	90 - 110	3	20

Lab Sample ID: 890-3904-A-1-C MS
Matrix: Solid
Analysis Batch: 44876

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	<5.03	U F1	252	281.2	F1	mg/Kg		111	90 - 110		

Lab Sample ID: 890-3904-A-1-D MSD
Matrix: Solid
Analysis Batch: 44876

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	<5.03	U F1	252	281.7	F1	mg/Kg		111	90 - 110	0	20

Lab Sample ID: MB 880-44967/1-A
Matrix: Solid
Analysis Batch: 45074

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			01/30/23 14:31	1

Lab Sample ID: LCS 880-44967/2-A
Matrix: Solid
Analysis Batch: 45074

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.6		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-44967/3-A
Matrix: Solid
Analysis Batch: 45074

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	254.5		mg/Kg		102	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-24203-A-3-D MS
Matrix: Solid
Analysis Batch: 45074

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	104		250	349.8		mg/Kg		99	90 - 110

Lab Sample ID: 880-24203-A-3-E MSD
Matrix: Solid
Analysis Batch: 45074

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	104		250	360.6		mg/Kg		103	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

GC VOA

Prep Batch: 44738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3906-1	PH01	Total/NA	Solid	5035	
890-3906-2	PH01	Total/NA	Solid	5035	
MB 880-44738/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44738/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44738/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3893-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3893-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 44986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3906-1	PH01	Total/NA	Solid	8021B	44738
890-3906-2	PH01	Total/NA	Solid	8021B	44738
MB 880-44738/5-A	Method Blank	Total/NA	Solid	8021B	44738
LCS 880-44738/1-A	Lab Control Sample	Total/NA	Solid	8021B	44738
LCSD 880-44738/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44738
890-3893-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	44738
890-3893-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44738

Analysis Batch: 45133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3906-1	PH01	Total/NA	Solid	Total BTEX	
890-3906-2	PH01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3906-1	PH01	Total/NA	Solid	8015NM Prep	
890-3906-2	PH01	Total/NA	Solid	8015NM Prep	
MB 880-45211/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45211/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45211/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23972-A-21-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23972-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3906-1	PH01	Total/NA	Solid	8015B NM	45211
890-3906-2	PH01	Total/NA	Solid	8015B NM	45211
MB 880-45211/1-A	Method Blank	Total/NA	Solid	8015B NM	45211
LCS 880-45211/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45211
LCSD 880-45211/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45211
880-23972-A-21-H MS	Matrix Spike	Total/NA	Solid	8015B NM	45211
880-23972-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45211

Analysis Batch: 45362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3906-1	PH01	Total/NA	Solid	8015 NM	
890-3906-2	PH01	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

HPLC/IC

Leach Batch: 44761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3906-1	PH01	Soluble	Solid	DI Leach	
MB 880-44761/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44761/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44761/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3904-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3904-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3906-1	PH01	Soluble	Solid	300.0	44761
MB 880-44761/1-A	Method Blank	Soluble	Solid	300.0	44761
LCS 880-44761/2-A	Lab Control Sample	Soluble	Solid	300.0	44761
LCSD 880-44761/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44761
890-3904-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	44761
890-3904-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44761

Leach Batch: 44967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3906-2	PH01	Soluble	Solid	DI Leach	
MB 880-44967/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44967/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44967/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-24203-A-3-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-24203-A-3-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 45074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3906-2	PH01	Soluble	Solid	300.0	44967
MB 880-44967/1-A	Method Blank	Soluble	Solid	300.0	44967
LCS 880-44967/2-A	Lab Control Sample	Soluble	Solid	300.0	44967
LCSD 880-44967/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44967
880-24203-A-3-D MS	Matrix Spike	Soluble	Solid	300.0	44967
880-24203-A-3-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44967

Lab Chronicle

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

Client Sample ID: PH01

Date Collected: 01/19/23 09:10
Date Received: 01/20/23 09:06

Lab Sample ID: 890-3906-1

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			5.02 g	5 mL	44738	01/25/23 14:56	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44986	01/30/23 18:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45133	01/31/23 13:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			45362	02/03/23 11:29	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45211	02/01/23 13:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45226	02/03/23 03:04	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		10			44876	01/26/23 22:16	CH	EET MID

Client Sample ID: PH01

Date Collected: 01/19/23 09:20
Date Received: 01/20/23 09:06

Lab Sample ID: 890-3906-2

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	44738	01/25/23 14:56	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44986	01/30/23 18:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45133	01/31/23 13:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			45362	02/03/23 11:29	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45211	02/01/23 13:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45226	02/03/23 03:26	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	44967	01/30/23 14:00	CH	EET MID
Soluble	Analysis	300.0		5			45074	01/30/23 17:17	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

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

Method Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

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: Harrier 35 Federal Com 001H

Job ID: 890-3906-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3906-1	PH01	Solid	01/19/23 09:10	01/20/23 09:06	4'
890-3906-2	PH01	Solid	01/19/23 09:20	01/20/23 09:06	6'

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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 1 of 1

Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817.683.2503	Email:	kjennings@ensolum.com

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:	Harrier 35 Federal Com 001H	Turn Around	
Project Number:	03D2024093	☑ Routine ☐ Rush	
Project Location:	Lea County, NM	Due Date:	
Sampler's Name:	Conner Shore	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TAM 004	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.2	
Total Containers:		Corrected Temperature:	4.0	

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2S0_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (8015)	Chlorides	BTEX (8021)
PH01	S	1.19.23	910	4'	G	1		x	x	x
PH01	S	1.19.23	920	6'	G	1		x	x	x

890-3906 Chain of Custody

Sample Comments

Incident Number
NAPP2225531487

1.20.23

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Conner Shore	Amanda Stagg	1.20.23 906			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-1107 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3906-1
Address: 1211 W Florida Ave	Due Date Requested: 1/26/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Harrier 35 Federal Com 001H	Project #: 89000094			
Site	SSOW#:			

Analysis Requested

Preservation Codes.

A HCL, B NaOH, C - Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
PH01 (890-3906-1)	1/19/23	09 10 Mountain		Solid			X	X	X	X	X	1	
PH01 (890-3906-2)	1/19/23	09 20 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I II, III IV, Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment.		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by:	Date/Time	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No		Cooler Temperature(s) °C and Other Remarks		

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3906-1
SDG Number: Lea County NM

Login Number: 3906
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3906-1
SDG Number: Lea County NM

Login Number: 3906
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 01/23/23 07:42 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").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/3/2023 7:13:45 PM

JOB DESCRIPTION

Harrier 35 Federal Com 001H
SDG NUMBER 03D2024093

JOB NUMBER

890-3907-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

Authorization

Generated
2/3/2023 7:13:45 PM

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

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Laboratory Job ID: 890-3907-1
SDG: 03D2024093

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
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: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

Job ID: 890-3907-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3907-1

Receipt
The samples were received on 1/20/2023 9:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH02 (890-3907-1), PH02 (890-3907-2) and PH02 (890-3907-3).

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

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

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

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

Client Sample ID: PH02

Date Collected: 01/19/23 10:00
Date Received: 01/20/23 09:06
Sample Depth: 1'

Lab Sample ID: 890-3907-1
Matrix: Solid

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		01/31/23 14:36	01/31/23 20:01	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/31/23 14:36	01/31/23 20:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/31/23 14:36	01/31/23 20:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/31/23 14:36	01/31/23 20:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/31/23 14:36	01/31/23 20:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/31/23 14:36	01/31/23 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*01/31/23 14:36*	*01/31/23 20:01*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*01/31/23 14:36*	*01/31/23 20:01*	*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			02/01/23 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			02/03/23 20:05	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		02/01/23 13:05	02/03/23 18:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 13:05	02/03/23 18:09	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 13:05	02/03/23 18:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*02/01/23 13:05*	*02/03/23 18:09*	*1*
o-Terphenyl	*96*		*70 - 130*	*02/01/23 13:05*	*02/03/23 18:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**93.9**		5.01		mg/Kg			01/26/23 22:29	1

Client Sample ID: PH02

Date Collected: 01/19/23 10:10
Date Received: 01/20/23 09:06
Sample Depth: 3'

Lab Sample ID: 890-3907-2
Matrix: Solid

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		01/31/23 14:36	01/31/23 20:22	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/31/23 14:36	01/31/23 20:22	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/31/23 14:36	01/31/23 20:22	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/31/23 14:36	01/31/23 20:22	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/31/23 14:36	01/31/23 20:22	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/31/23 14:36	01/31/23 20:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*01/31/23 14:36*	*01/31/23 20:22*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

Client Sample ID: PH02

Date Collected: 01/19/23 10:10
Date Received: 01/20/23 09:06
Sample Depth: 3'

Lab Sample ID: 890-3907-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*01/31/23 14:36*	*01/31/23 20:22*	*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			02/01/23 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			02/03/23 20:05	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		02/01/23 13:05	02/03/23 18:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/01/23 13:05	02/03/23 18:31	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/01/23 13:05	02/03/23 18:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*02/01/23 13:05*	*02/03/23 18:31*	*1*
o-Terphenyl	*98*		*70 - 130*	*02/01/23 13:05*	*02/03/23 18:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**54.9**		5.00	mg/Kg			01/26/23 22:35	1

Client Sample ID: PH02

Date Collected: 01/19/23 10:20
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3907-3
Matrix: Solid

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		01/31/23 14:36	01/31/23 20:42	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/31/23 14:36	01/31/23 20:42	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/31/23 14:36	01/31/23 20:42	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/31/23 14:36	01/31/23 20:42	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/31/23 14:36	01/31/23 20:42	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/31/23 14:36	01/31/23 20:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*01/31/23 14:36*	*01/31/23 20:42*	*1*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*	*01/31/23 14:36*	*01/31/23 20:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/01/23 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			02/03/23 20:05	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

Client Sample ID: PH02
Date Collected: 01/19/23 10:20
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3907-3
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	49.9		mg/Kg		02/01/23 13:05	02/03/23 18:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 13:05	02/03/23 18:54	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 13:05	02/03/23 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*02/01/23 13:05*	*02/03/23 18:54*	*1*
o-Terphenyl	*111*		*70 - 130*	*02/01/23 13:05*	*02/03/23 18:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**18.6**		5.00		mg/Kg			01/26/23 22:41	1

Surrogate Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-23952-A-1-B MS	Matrix Spike	97	112
880-23952-A-1-C MSD	Matrix Spike Duplicate	98	112
890-3907-1	PH02	111	114
890-3907-2	PH02	107	117
890-3907-3	PH02	111	119
LCS 880-45147/1-A	Lab Control Sample	94	112
LCSD 880-45147/2-A	Lab Control Sample Dup	99	113
MB 880-45147/5-A	Method Blank	102	105

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3907-1	PH02	93	96
890-3907-2	PH02	95	98
890-3907-3	PH02	112	111

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45147/5-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45147

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:36	01/31/23 17:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*01/31/23 14:36*	*01/31/23 17:29*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*01/31/23 14:36*	*01/31/23 17:29*	*1*

Lab Sample ID: LCS 880-45147/1-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45147

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08233		mg/Kg		82	70 - 130		
Toluene			0.100	0.07766		mg/Kg		78	70 - 130		
Ethylbenzene			0.100	0.07484		mg/Kg		75	70 - 130		
m-Xylene & p-Xylene			0.200	0.1584		mg/Kg		79	70 - 130		
o-Xylene			0.100	0.07668		mg/Kg		77	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 880-45147/2-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45147

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09378		mg/Kg		94	70 - 130	13	35
Toluene			0.100	0.08580		mg/Kg		86	70 - 130	10	35
Ethylbenzene			0.100	0.08489		mg/Kg		85	70 - 130	13	35
m-Xylene & p-Xylene			0.200	0.1784		mg/Kg		89	70 - 130	12	35
o-Xylene			0.100	0.08543		mg/Kg		85	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-23952-A-1-B MS
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.101	0.08219		mg/Kg		82	70 - 130		
Toluene	<0.00202	U	0.101	0.07762		mg/Kg		77	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

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

Lab Sample ID: 880-23952-A-1-B MS
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.101	0.07334		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.202	0.1547		mg/Kg		77	70 - 130
o-Xylene	<0.00202	U	0.101	0.07303		mg/Kg		72	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-23952-A-1-C MSD
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45147

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.08613		mg/Kg		86	70 - 130	5	35
Toluene	<0.00202	U	0.0996	0.07815		mg/Kg		78	70 - 130	1	35
Ethylbenzene	<0.00202	U	0.0996	0.07266		mg/Kg		73	70 - 130	1	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1519		mg/Kg		76	70 - 130	2	35
o-Xylene	<0.00202	U	0.0996	0.07278		mg/Kg		73	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44761/1-A
Matrix: Solid
Analysis Batch: 44876

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			01/26/23 20:56	1

Lab Sample ID: LCS 880-44761/2-A
Matrix: Solid
Analysis Batch: 44876

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	265.0		mg/Kg		106	90 - 110

Lab Sample ID: LCSD 880-44761/3-A
Matrix: Solid
Analysis Batch: 44876

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	274.4		mg/Kg		110	90 - 110	3	20

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3907-3 MS
Matrix: Solid
Analysis Batch: 44876

Client Sample ID: PH02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	18.6		250	289.2		mg/Kg		108	90 - 110

Lab Sample ID: 890-3907-3 MSD
Matrix: Solid
Analysis Batch: 44876

Client Sample ID: PH02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	18.6		250	289.9		mg/Kg		109	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

GC VOA

Analysis Batch: 45129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3907-1	PH02	Total/NA	Solid	8021B	45147
890-3907-2	PH02	Total/NA	Solid	8021B	45147
890-3907-3	PH02	Total/NA	Solid	8021B	45147
MB 880-45147/5-A	Method Blank	Total/NA	Solid	8021B	45147
LCS 880-45147/1-A	Lab Control Sample	Total/NA	Solid	8021B	45147
LCSD 880-45147/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45147
880-23952-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	45147
880-23952-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45147

Prep Batch: 45147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3907-1	PH02	Total/NA	Solid	5035	
890-3907-2	PH02	Total/NA	Solid	5035	
890-3907-3	PH02	Total/NA	Solid	5035	
MB 880-45147/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45147/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45147/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23952-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-23952-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 45204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3907-1	PH02	Total/NA	Solid	Total BTEX	
890-3907-2	PH02	Total/NA	Solid	Total BTEX	
890-3907-3	PH02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3907-1	PH02	Total/NA	Solid	8015NM Prep	
890-3907-2	PH02	Total/NA	Solid	8015NM Prep	
890-3907-3	PH02	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3907-1	PH02	Total/NA	Solid	8015B NM	45210
890-3907-2	PH02	Total/NA	Solid	8015B NM	45210
890-3907-3	PH02	Total/NA	Solid	8015B NM	45210

Analysis Batch: 45437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3907-1	PH02	Total/NA	Solid	8015 NM	
890-3907-2	PH02	Total/NA	Solid	8015 NM	
890-3907-3	PH02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3907-1	PH02	Soluble	Solid	DI Leach	
890-3907-2	PH02	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

HPLC/IC (Continued)

Leach Batch: 44761 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3907-3	PH02	Soluble	Solid	DI Leach	
MB 880-44761/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44761/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44761/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3907-3 MS	PH02	Soluble	Solid	DI Leach	
890-3907-3 MSD	PH02	Soluble	Solid	DI Leach	

Analysis Batch: 44876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3907-1	PH02	Soluble	Solid	300.0	44761
890-3907-2	PH02	Soluble	Solid	300.0	44761
890-3907-3	PH02	Soluble	Solid	300.0	44761
MB 880-44761/1-A	Method Blank	Soluble	Solid	300.0	44761
LCS 880-44761/2-A	Lab Control Sample	Soluble	Solid	300.0	44761
LCSD 880-44761/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44761
890-3907-3 MS	PH02	Soluble	Solid	300.0	44761
890-3907-3 MSD	PH02	Soluble	Solid	300.0	44761

Lab Chronicle

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

Client Sample ID: PH02

Date Collected: 01/19/23 10:00
Date Received: 01/20/23 09:06

Lab Sample ID: 890-3907-1

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			5.03 g	5 mL	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	01/31/23 20:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45204	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45437	02/03/23 20:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45210	02/01/23 13:05	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45299	02/03/23 18:09	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		1			44876	01/26/23 22:29	CH	EET MID

Client Sample ID: PH02

Date Collected: 01/19/23 10:10
Date Received: 01/20/23 09:06

Lab Sample ID: 890-3907-2

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			4.97 g	5 mL	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	01/31/23 20:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45204	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45437	02/03/23 20:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45210	02/01/23 13:05	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45299	02/03/23 18:31	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		1			44876	01/26/23 22:35	CH	EET MID

Client Sample ID: PH02

Date Collected: 01/19/23 10:20
Date Received: 01/20/23 09:06

Lab Sample ID: 890-3907-3

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			4.99 g	5 mL	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	01/31/23 20:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45204	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45437	02/03/23 20:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45210	02/01/23 13:05	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45299	02/03/23 18:54	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		1			44876	01/26/23 22:41	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: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

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

Method Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

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: Harrier 35 Federal Com 001H

Job ID: 890-3907-1
SDG: 03D2024093

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3907-1	PH02	Solid	01/19/23 10:00	01/20/23 09:06	1'
890-3907-2	PH02	Solid	01/19/23 10:10	01/20/23 09:06	3'
890-3907-3	PH02	Solid	01/19/23 10:20	01/20/23 09:06	6'

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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: _____

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Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817.683.2503	Email:	kjennings@ensolum.com

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:	Harrier 35 Federal Com 001H	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024093	Due Date:	
Project Location:	Lea County, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TDM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.2
Total Containers:		Corrected Temperature:	4.0

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (8015)	Chlorides	BTEX (8021)
PH02	S	1.19.23	1000	1'	G	1		x	x	x
PH02	S	1.19.23	1010	3'	G	1		x	x	x
PH02	S	1.19.23	1020	6'	G	1		x	x	x

890-3907 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Incident Number
NAPP2225531487

1.20.23

Conner Shore

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		1-20-23 906			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

eurofins
Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s).	COC No: 890-1107 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3907-1
Address: 1211 W Florida Ave, ,	Due Date Requested: 1/26/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #			
Project Name: Harrier 35 Federal Com 001H	Project #: 89000094			
Site:	SSOW#:			

Analysis Requested

Preservation Codes.

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
PH02 (890-3907-1)	1/19/23	10 00 Mountain		Solid			X	X	X	X	X	1	
PH02 (890-3907-2)	1/19/23	10 10 Mountain		Solid			X	X	X	X	X	1	
PH02 (890-3907-3)	1/19/23	10 20 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I, II III, IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:
Relinquished by:	Date/Time	Company	Received by: P Kramer Date/Time: Company
Relinquished by:	Date/Time	Company	Received by: Date/Time Company
Relinquished by	Date/Time	Company	Received by: Date/Time Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3907-1
SDG Number: 03D2024093

Login Number: 3907
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3907-1
SDG Number: 03D2024093

Login Number: 3907
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 01/23/23 07:42 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").	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/3/2023 11:14:35 AM

JOB DESCRIPTION

Harrier 35 Federal Com 001H
SDG NUMBER Lea County NM

JOB NUMBER

890-3908-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

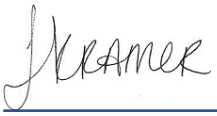
my EOL

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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2/3/2023 11:14:35 AM

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

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Laboratory Job ID: 890-3908-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-3908-1
Project/Site: Harrier 35 Federal Com 001H SDG: Lea County NM

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
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: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

Job ID: 890-3908-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3908-1

Receipt
The samples were received on 1/20/2023 9:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH03 (890-3908-1), PH03 (890-3908-2) and PH03 (890-3908-3).

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

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

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

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

Client Sample ID: PH03

Lab Sample ID: 890-3908-1
Matrix: Solid
Date Collected: 01/19/23 10:30
Date Received: 01/20/23 09:06
Sample Depth: 1'

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		01/31/23 14:36	01/31/23 21:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 21:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 21:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:36	01/31/23 21:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 21:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:36	01/31/23 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*01/31/23 14:36*	*01/31/23 21:02*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*01/31/23 14:36*	*01/31/23 21:02*	*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			02/01/23 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			02/03/23 11:29	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		02/01/23 13:08	02/03/23 03:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/03/23 03:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/03/23 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*02/01/23 13:08*	*02/03/23 03:48*	*1*
o-Terphenyl	*117*		*70 - 130*	*02/01/23 13:08*	*02/03/23 03:48*	*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			01/26/23 23:00	1

Client Sample ID: PH03

Lab Sample ID: 890-3908-2
Matrix: Solid
Date Collected: 01/19/23 10:40
Date Received: 01/20/23 09:06
Sample Depth: 3'

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		01/31/23 14:36	01/31/23 22:53	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/31/23 14:36	01/31/23 22:53	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/31/23 14:36	01/31/23 22:53	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/31/23 14:36	01/31/23 22:53	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/31/23 14:36	01/31/23 22:53	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/31/23 14:36	01/31/23 22:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*01/31/23 14:36*	*01/31/23 22:53*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

Client Sample ID: PH03

Date Collected: 01/19/23 10:40
Date Received: 01/20/23 09:06
Sample Depth: 3'

Lab Sample ID: 890-3908-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*01/31/23 14:36*	*01/31/23 22:53*	*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			02/01/23 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			02/03/23 11:29	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		02/01/23 13:08	02/03/23 04:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/01/23 13:08	02/03/23 04:09	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/01/23 13:08	02/03/23 04:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*02/01/23 13:08*	*02/03/23 04:09*	*1*
o-Terphenyl	*115*		*70 - 130*	*02/01/23 13:08*	*02/03/23 04:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**77.6**		5.00	mg/Kg			01/26/23 23:06	1

Client Sample ID: PH03

Date Collected: 01/19/23 10:50
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3908-3
Matrix: Solid

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		01/31/23 14:36	01/31/23 23:13	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/31/23 14:36	01/31/23 23:13	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/31/23 14:36	01/31/23 23:13	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		01/31/23 14:36	01/31/23 23:13	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/31/23 14:36	01/31/23 23:13	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		01/31/23 14:36	01/31/23 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*01/31/23 14:36*	*01/31/23 23:13*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*01/31/23 14:36*	*01/31/23 23:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			02/01/23 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			02/03/23 11:29	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

Client Sample ID: PH03
Date Collected: 01/19/23 10:50
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3908-3
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	49.9		mg/Kg		02/01/23 13:08	02/03/23 04:30	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/03/23 04:30	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/03/23 04:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*02/01/23 13:08*	*02/03/23 04:30*	*1*
o-Terphenyl	*105*		*70 - 130*	*02/01/23 13:08*	*02/03/23 04:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.0**		24.9		mg/Kg			01/30/23 17:24	5

Surrogate Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-23952-A-1-B MS	Matrix Spike	97	112										
880-23952-A-1-C MSD	Matrix Spike Duplicate	98	112										
890-3908-1	PH03	115	113										
890-3908-2	PH03	102	112										
890-3908-3	PH03	106	115										
LCS 880-45147/1-A	Lab Control Sample	94	112										
LCSD 880-45147/2-A	Lab Control Sample Dup	99	113										
MB 880-45147/5-A	Method Blank	102	105										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-23972-A-21-H MS	Matrix Spike	91	88										
880-23972-A-21-I MSD	Matrix Spike Duplicate	86	82										
890-3908-1	PH03	119	117										
890-3908-2	PH03	118	115										
890-3908-3	PH03	105	105										
LCS 880-45211/2-A	Lab Control Sample	111	100										
LCSD 880-45211/3-A	Lab Control Sample Dup	115	105										
MB 880-45211/1-A	Method Blank	124	130										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45147/5-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45147

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:36	01/31/23 17:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*01/31/23 14:36*	*01/31/23 17:29*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*01/31/23 14:36*	*01/31/23 17:29*	*1*

Lab Sample ID: LCS 880-45147/1-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45147

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08233		mg/Kg		82	70 - 130		
Toluene			0.100	0.07766		mg/Kg		78	70 - 130		
Ethylbenzene			0.100	0.07484		mg/Kg		75	70 - 130		
m-Xylene & p-Xylene			0.200	0.1584		mg/Kg		79	70 - 130		
o-Xylene			0.100	0.07668		mg/Kg		77	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 880-45147/2-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45147

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09378		mg/Kg		94	70 - 130	13	35
Toluene			0.100	0.08580		mg/Kg		86	70 - 130	10	35
Ethylbenzene			0.100	0.08489		mg/Kg		85	70 - 130	13	35
m-Xylene & p-Xylene			0.200	0.1784		mg/Kg		89	70 - 130	12	35
o-Xylene			0.100	0.08543		mg/Kg		85	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-23952-A-1-B MS
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.101	0.08219		mg/Kg		82	70 - 130		
Toluene	<0.00202	U	0.101	0.07762		mg/Kg		77	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

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

Lab Sample ID: 880-23952-A-1-B MS
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.101	0.07334		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.202	0.1547		mg/Kg		77	70 - 130
o-Xylene	<0.00202	U	0.101	0.07303		mg/Kg		72	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-23952-A-1-C MSD
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45147

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.08613		mg/Kg		86	70 - 130	5	35
Toluene	<0.00202	U	0.0996	0.07815		mg/Kg		78	70 - 130	1	35
Ethylbenzene	<0.00202	U	0.0996	0.07266		mg/Kg		73	70 - 130	1	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1519		mg/Kg		76	70 - 130	2	35
o-Xylene	<0.00202	U	0.0996	0.07278		mg/Kg		73	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

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

Lab Sample ID: MB 880-45211/1-A
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45211

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/02/23 20:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/02/23 20:18	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 13:08	02/02/23 20:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*02/01/23 13:08*	*02/02/23 20:18*	*1*
o-Terphenyl	*130*		*70 - 130*	*02/01/23 13:08*	*02/02/23 20:18*	*1*

Lab Sample ID: LCS 880-45211/2-A
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45211

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			999	840.3		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)			999	922.3		mg/Kg		92	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

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

Lab Sample ID: LCS 880-45211/2-A
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45211

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: LCSD 880-45211/3-A
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45211

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			999	848.1		mg/Kg		85	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			999	939.0		mg/Kg		94	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: 880-23972-A-21-H MS
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45211

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1158		mg/Kg		112	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1015		mg/Kg		102	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: 880-23972-A-21-I MSD
Matrix: Solid
Analysis Batch: 45226

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45211

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	998	1061		mg/Kg		102	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	955.2		mg/Kg		96	70 - 130	6	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	82		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44761/1-A
Matrix: Solid
Analysis Batch: 44876

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			01/26/23 20:56	1

Lab Sample ID: LCS 880-44761/2-A
Matrix: Solid
Analysis Batch: 44876

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	265.0		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-44761/3-A
Matrix: Solid
Analysis Batch: 44876

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	274.4		mg/Kg		110	90 - 110	3	20

Lab Sample ID: 890-3907-A-3-B MS
Matrix: Solid
Analysis Batch: 44876

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	18.6		250	289.2		mg/Kg		108	90 - 110		

Lab Sample ID: 890-3907-A-3-C MSD
Matrix: Solid
Analysis Batch: 44876

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	18.6		250	289.9		mg/Kg		109	90 - 110	0	20

Lab Sample ID: MB 880-44967/1-A
Matrix: Solid
Analysis Batch: 45074

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			01/30/23 14:31	1

Lab Sample ID: LCS 880-44967/2-A
Matrix: Solid
Analysis Batch: 45074

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.6		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-44967/3-A
Matrix: Solid
Analysis Batch: 45074

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	254.5		mg/Kg		102	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-24203-A-3-D MS
Matrix: Solid
Analysis Batch: 45074

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	104		250	349.8		mg/Kg		99	90 - 110

Lab Sample ID: 880-24203-A-3-E MSD
Matrix: Solid
Analysis Batch: 45074

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	104		250	360.6		mg/Kg		103	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

GC VOA

Analysis Batch: 45129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3908-1	PH03	Total/NA	Solid	8021B	45147
890-3908-2	PH03	Total/NA	Solid	8021B	45147
890-3908-3	PH03	Total/NA	Solid	8021B	45147
MB 880-45147/5-A	Method Blank	Total/NA	Solid	8021B	45147
LCS 880-45147/1-A	Lab Control Sample	Total/NA	Solid	8021B	45147
LCSD 880-45147/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45147
880-23952-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	45147
880-23952-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45147

Prep Batch: 45147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3908-1	PH03	Total/NA	Solid	5035	
890-3908-2	PH03	Total/NA	Solid	5035	
890-3908-3	PH03	Total/NA	Solid	5035	
MB 880-45147/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45147/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45147/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23952-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-23952-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 45205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3908-1	PH03	Total/NA	Solid	Total BTEX	
890-3908-2	PH03	Total/NA	Solid	Total BTEX	
890-3908-3	PH03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3908-1	PH03	Total/NA	Solid	8015NM Prep	
890-3908-2	PH03	Total/NA	Solid	8015NM Prep	
890-3908-3	PH03	Total/NA	Solid	8015NM Prep	
MB 880-45211/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45211/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45211/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23972-A-21-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23972-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3908-1	PH03	Total/NA	Solid	8015B NM	45211
890-3908-2	PH03	Total/NA	Solid	8015B NM	45211
890-3908-3	PH03	Total/NA	Solid	8015B NM	45211
MB 880-45211/1-A	Method Blank	Total/NA	Solid	8015B NM	45211
LCS 880-45211/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45211
LCSD 880-45211/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45211
880-23972-A-21-H MS	Matrix Spike	Total/NA	Solid	8015B NM	45211
880-23972-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45211

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

GC Semi VOA

Analysis Batch: 45363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3908-1	PH03	Total/NA	Solid	8015 NM	
890-3908-2	PH03	Total/NA	Solid	8015 NM	
890-3908-3	PH03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3908-1	PH03	Soluble	Solid	DI Leach	
890-3908-2	PH03	Soluble	Solid	DI Leach	
MB 880-44761/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44761/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44761/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3907-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3907-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3908-1	PH03	Soluble	Solid	300.0	44761
890-3908-2	PH03	Soluble	Solid	300.0	44761
MB 880-44761/1-A	Method Blank	Soluble	Solid	300.0	44761
LCS 880-44761/2-A	Lab Control Sample	Soluble	Solid	300.0	44761
LCSD 880-44761/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44761
890-3907-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	44761
890-3907-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44761

Leach Batch: 44967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3908-3	PH03	Soluble	Solid	DI Leach	
MB 880-44967/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44967/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44967/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-24203-A-3-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-24203-A-3-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 45074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3908-3	PH03	Soluble	Solid	300.0	44967
MB 880-44967/1-A	Method Blank	Soluble	Solid	300.0	44967
LCS 880-44967/2-A	Lab Control Sample	Soluble	Solid	300.0	44967
LCSD 880-44967/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44967
880-24203-A-3-D MS	Matrix Spike	Soluble	Solid	300.0	44967
880-24203-A-3-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44967

Lab Chronicle

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

Client Sample ID: PH03
Date Collected: 01/19/23 10:30
Date Received: 01/20/23 09:06

Lab Sample ID: 890-3908-1
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			5.00 g	5 mL	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	01/31/23 21:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45205	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45363	02/03/23 11:29	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45211	02/01/23 13:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45226	02/03/23 03:48	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		1			44876	01/26/23 23:00	CH	EET MID

Client Sample ID: PH03
Date Collected: 01/19/23 10:40
Date Received: 01/20/23 09:06

Lab Sample ID: 890-3908-2
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			4.98 g	5 mL	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	01/31/23 22:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45205	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45363	02/03/23 11:29	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45211	02/01/23 13:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45226	02/03/23 04:09	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		1			44876	01/26/23 23:06	CH	EET MID

Client Sample ID: PH03
Date Collected: 01/19/23 10:50
Date Received: 01/20/23 09:06

Lab Sample ID: 890-3908-3
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			4.95 g	5 mL	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	01/31/23 23:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45205	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45363	02/03/23 11:29	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45211	02/01/23 13:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45226	02/03/23 04:30	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	44967	01/30/23 14:00	CH	EET MID
Soluble	Analysis	300.0		5			45074	01/30/23 17:24	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: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

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

Method Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

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: Harrier 35 Federal Com 001H

Job ID: 890-3908-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3908-1	PH03	Solid	01/19/23 10:30	01/20/23 09:06	1'
890-3908-2	PH03	Solid	01/19/23 10:40	01/20/23 09:06	3'
890-3908-3	PH03	Solid	01/19/23 10:50	01/20/23 09:06	6'

eurofins | 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

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Work Order No: _____

Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817.683.2503	Email:	kjennings@ensolum.com

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:	Harrier 35 Federal Com 001H	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024093	Due Date:	
Project Location:	Lea County, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
PO #:			

SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice: (Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	IR-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.2
Total Containers:		Corrected Temperature:	4.0

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2S0_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH (8015)	Chlorides	BTEX (8021)
PH03	S	1.19.23	1030	1'	G	1		x	x	x
PH03	S	1.19.23	1040	3'	G	1		x	x	x
PH03	S	1.19.23	1050	6'	G	1		x	x	x

890-3908 Chain of Custody

Sample Comments

Incident Number
NAPP2225531487

1-20-23

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		1-20-23 9:36	2		
3			4		
5			6		

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

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-1107 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3908-1
Address: 1211 W Florida Ave ,	Due Date Requested: 1/26/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Harrier 35 Federal Com 001H	Project #: 89000094			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
PH03 (890-3908-1)	1/19/23	10 30 Mountain		Solid			X	X	X	X	X	1	
PH03 (890-3908-2)	1/19/23	10 40 Mountain		Solid			X	X	X	X	X	1	
PH03 (890-3908-3)	1/19/23	10 50 Mountain		Solid			X	X	X	X	X	1	

Note Since laboratory accreditations are subject to change Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II, III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by: Kramer	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3908-1
SDG Number: Lea County NM

Login Number: 3908
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3908-1
SDG Number: Lea County NM

Login Number: 3908
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 01/23/23 07:42 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").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/4/2023 9:28:13 AM

JOB DESCRIPTION

Harrier 35 Federal Com 001H
SDG NUMBER 03D2024093

JOB NUMBER

890-3909-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

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
2/4/2023 9:28:13 AM

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

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Laboratory Job ID: 890-3909-1
SDG: 03D2024093

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
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: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

Job ID: 890-3909-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3909-1

Receipt
The samples were received on 1/20/2023 9:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH04 (890-3909-1), PH04 (890-3909-2) and PH04 (890-3909-3).

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

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

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

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

Client Sample ID: PH04

Date Collected: 01/19/23 11:00
Date Received: 01/20/23 09:06
Sample Depth: 1'

Lab Sample ID: 890-3909-1
Matrix: Solid

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		01/31/23 14:36	01/31/23 23:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/31/23 14:36	01/31/23 23:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/31/23 14:36	01/31/23 23:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/31/23 14:36	01/31/23 23:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/31/23 14:36	01/31/23 23:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/31/23 14:36	01/31/23 23:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*01/31/23 14:36*	*01/31/23 23:34*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*01/31/23 14:36*	*01/31/23 23:34*	*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			02/01/23 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			02/04/23 09:57	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		02/01/23 14:44	02/04/23 02:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 14:44	02/04/23 02:51	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 14:44	02/04/23 02:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*02/01/23 14:44*	*02/04/23 02:51*	*1*
o-Terphenyl	*90*		*70 - 130*	*02/01/23 14:44*	*02/04/23 02:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**77.1**		4.95		mg/Kg			01/26/23 23:31	1

Client Sample ID: PH04

Date Collected: 01/19/23 11:10
Date Received: 01/20/23 09:06
Sample Depth: 3'

Lab Sample ID: 890-3909-2
Matrix: Solid

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		01/31/23 14:36	01/31/23 23:54	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/31/23 14:36	01/31/23 23:54	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/31/23 14:36	01/31/23 23:54	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		01/31/23 14:36	01/31/23 23:54	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/31/23 14:36	01/31/23 23:54	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		01/31/23 14:36	01/31/23 23:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*01/31/23 14:36*	*01/31/23 23:54*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

Client Sample ID: PH04

Date Collected: 01/19/23 11:10
Date Received: 01/20/23 09:06
Sample Depth: 3'

Lab Sample ID: 890-3909-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*01/31/23 14:36*	*01/31/23 23:54*	*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			02/01/23 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			02/04/23 09:57	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		02/01/23 14:44	02/04/23 03:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/01/23 14:44	02/04/23 03:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/01/23 14:44	02/04/23 03:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*02/01/23 14:44*	*02/04/23 03:13*	*1*
o-Terphenyl	*92*		*70 - 130*	*02/01/23 14:44*	*02/04/23 03:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17.1**		5.00	mg/Kg			01/26/23 23:37	1

Client Sample ID: PH04

Date Collected: 01/19/23 11:20
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3909-3
Matrix: Solid

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		01/31/23 14:36	02/01/23 00:15	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/31/23 14:36	02/01/23 00:15	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/31/23 14:36	02/01/23 00:15	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/31/23 14:36	02/01/23 00:15	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/31/23 14:36	02/01/23 00:15	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/31/23 14:36	02/01/23 00:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*01/31/23 14:36*	*02/01/23 00:15*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*01/31/23 14:36*	*02/01/23 00:15*	*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			02/01/23 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			02/04/23 09:57	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

Client Sample ID: PH04

Date Collected: 01/19/23 11:20
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3909-3

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	49.9		mg/Kg		02/01/23 14:44	02/04/23 03:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 14:44	02/04/23 03:35	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 14:44	02/04/23 03:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*02/01/23 14:44*	*02/04/23 03:35*	*1*
o-Terphenyl	*107*		*70 - 130*	*02/01/23 14:44*	*02/04/23 03:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16.6**		4.99		mg/Kg			01/26/23 23:43	1

Surrogate Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-23952-A-1-B MS	Matrix Spike	97	112										
880-23952-A-1-C MSD	Matrix Spike Duplicate	98	112										
890-3909-1	PH04	108	112										
890-3909-2	PH04	105	113										
890-3909-3	PH04	108	116										
LCS 880-45147/1-A	Lab Control Sample	94	112										
LCSD 880-45147/2-A	Lab Control Sample Dup	99	113										
MB 880-45147/5-A	Method Blank	102	105										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-3901-A-1-D MS	Matrix Spike	110	103										
890-3901-A-1-E MSD	Matrix Spike Duplicate	123	104										
890-3909-1	PH04	85	90										
890-3909-2	PH04	85	92										
890-3909-3	PH04	106	107										
LCS 880-45212/2-A	Lab Control Sample	94	101										
LCSD 880-45212/3-A	Lab Control Sample Dup	126	112										
MB 880-45212/1-A	Method Blank	121	124										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45147/5-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45147

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:36	01/31/23 17:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*01/31/23 14:36*	*01/31/23 17:29*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*01/31/23 14:36*	*01/31/23 17:29*	*1*

Lab Sample ID: LCS 880-45147/1-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45147

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08233		mg/Kg		82	70 - 130		
Toluene			0.100	0.07766		mg/Kg		78	70 - 130		
Ethylbenzene			0.100	0.07484		mg/Kg		75	70 - 130		
m-Xylene & p-Xylene			0.200	0.1584		mg/Kg		79	70 - 130		
o-Xylene			0.100	0.07668		mg/Kg		77	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 880-45147/2-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45147

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09378		mg/Kg		94	70 - 130	13	35
Toluene			0.100	0.08580		mg/Kg		86	70 - 130	10	35
Ethylbenzene			0.100	0.08489		mg/Kg		85	70 - 130	13	35
m-Xylene & p-Xylene			0.200	0.1784		mg/Kg		89	70 - 130	12	35
o-Xylene			0.100	0.08543		mg/Kg		85	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-23952-A-1-B MS
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.101	0.08219		mg/Kg		82	70 - 130		
Toluene	<0.00202	U	0.101	0.07762		mg/Kg		77	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

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

Lab Sample ID: 880-23952-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45129 — **Prep Batch: 45147**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.101	0.07334		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.202	0.1547		mg/Kg		77	70 - 130
o-Xylene	<0.00202	U	0.101	0.07303		mg/Kg		72	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-23952-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45129 — **Prep Batch: 45147**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.08613		mg/Kg		86	70 - 130	5	35
Toluene	<0.00202	U	0.0996	0.07815		mg/Kg		78	70 - 130	1	35
Ethylbenzene	<0.00202	U	0.0996	0.07266		mg/Kg		73	70 - 130	1	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1519		mg/Kg		76	70 - 130	2	35
o-Xylene	<0.00202	U	0.0996	0.07278		mg/Kg		73	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

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

Lab Sample ID: MB 880-45212/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45299 — **Prep Batch: 45212**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/01/23 14:44	02/03/23 19:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/01/23 14:44	02/03/23 19:59	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/01/23 14:44	02/03/23 19:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*02/01/23 14:44*	*02/03/23 19:59*	*1*
o-Terphenyl	*124*		*70 - 130*	*02/01/23 14:44*	*02/03/23 19:59*	*1*

Lab Sample ID: LCS 880-45212/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45299 — **Prep Batch: 45212**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	999	925.3		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	999	917.8		mg/Kg		92	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

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

Lab Sample ID: LCS 880-45212/2-A
Matrix: Solid
Analysis Batch: 45299

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45212

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-45212/3-A
Matrix: Solid
Analysis Batch: 45299

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45212

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			999	965.9		mg/Kg		97	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			999	1017		mg/Kg		102	70 - 130	10	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	126		70 - 130
o-Terphenyl	112		70 - 130

Lab Sample ID: 890-3901-A-1-D MS
Matrix: Solid
Analysis Batch: 45299

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45212

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1271		mg/Kg		126	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1072		mg/Kg		107	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 890-3901-A-1-E MSD
Matrix: Solid
Analysis Batch: 45299

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45212

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	998	1263		mg/Kg		125	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1068		mg/Kg		107	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	104		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44761/1-A
Matrix: Solid
Analysis Batch: 44876

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			01/26/23 20:56	1

Lab Sample ID: LCS 880-44761/2-A
Matrix: Solid
Analysis Batch: 44876

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	265.0		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-44761/3-A
Matrix: Solid
Analysis Batch: 44876

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	274.4		mg/Kg		110	90 - 110	3	20

Lab Sample ID: 890-3907-A-3-B MS
Matrix: Solid
Analysis Batch: 44876

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	18.6		250	289.2		mg/Kg		108	90 - 110		

Lab Sample ID: 890-3907-A-3-C MSD
Matrix: Solid
Analysis Batch: 44876

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	18.6		250	289.9		mg/Kg		109	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

GC VOA

Analysis Batch: 45129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3909-1	PH04	Total/NA	Solid	8021B	45147
890-3909-2	PH04	Total/NA	Solid	8021B	45147
890-3909-3	PH04	Total/NA	Solid	8021B	45147
MB 880-45147/5-A	Method Blank	Total/NA	Solid	8021B	45147
LCS 880-45147/1-A	Lab Control Sample	Total/NA	Solid	8021B	45147
LCSD 880-45147/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45147
880-23952-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	45147
880-23952-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45147

Prep Batch: 45147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3909-1	PH04	Total/NA	Solid	5035	
890-3909-2	PH04	Total/NA	Solid	5035	
890-3909-3	PH04	Total/NA	Solid	5035	
MB 880-45147/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45147/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45147/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23952-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-23952-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 45206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3909-1	PH04	Total/NA	Solid	Total BTEX	
890-3909-2	PH04	Total/NA	Solid	Total BTEX	
890-3909-3	PH04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3909-1	PH04	Total/NA	Solid	8015NM Prep	
890-3909-2	PH04	Total/NA	Solid	8015NM Prep	
890-3909-3	PH04	Total/NA	Solid	8015NM Prep	
MB 880-45212/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45212/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45212/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3901-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3901-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3909-1	PH04	Total/NA	Solid	8015B NM	45212
890-3909-2	PH04	Total/NA	Solid	8015B NM	45212
890-3909-3	PH04	Total/NA	Solid	8015B NM	45212
MB 880-45212/1-A	Method Blank	Total/NA	Solid	8015B NM	45212
LCS 880-45212/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45212
LCSD 880-45212/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45212
890-3901-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	45212
890-3901-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45212

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

GC Semi VOA

Analysis Batch: 45460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3909-1	PH04	Total/NA	Solid	8015 NM	
890-3909-2	PH04	Total/NA	Solid	8015 NM	
890-3909-3	PH04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3909-1	PH04	Soluble	Solid	DI Leach	
890-3909-2	PH04	Soluble	Solid	DI Leach	
890-3909-3	PH04	Soluble	Solid	DI Leach	
MB 880-44761/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44761/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44761/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3907-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3907-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3909-1	PH04	Soluble	Solid	300.0	44761
890-3909-2	PH04	Soluble	Solid	300.0	44761
890-3909-3	PH04	Soluble	Solid	300.0	44761
MB 880-44761/1-A	Method Blank	Soluble	Solid	300.0	44761
LCS 880-44761/2-A	Lab Control Sample	Soluble	Solid	300.0	44761
LCSD 880-44761/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44761
890-3907-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	44761
890-3907-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44761

Lab Chronicle

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

Client Sample ID: PH04
Date Collected: 01/19/23 11:00
Date Received: 01/20/23 09:06

Lab Sample ID: 890-3909-1
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			5.02 g	5 mL	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	01/31/23 23:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45206	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45460	02/04/23 09:57	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45212	02/01/23 14:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45299	02/04/23 02:51	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		1			44876	01/26/23 23:31	CH	EET MID

Client Sample ID: PH04
Date Collected: 01/19/23 11:10
Date Received: 01/20/23 09:06

Lab Sample ID: 890-3909-2
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			5.05 g	5 mL	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	01/31/23 23:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45206	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45460	02/04/23 09:57	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45212	02/01/23 14:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45299	02/04/23 03:13	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		1			44876	01/26/23 23:37	CH	EET MID

Client Sample ID: PH04
Date Collected: 01/19/23 11:20
Date Received: 01/20/23 09:06

Lab Sample ID: 890-3909-3
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			4.96 g	5 mL	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	02/01/23 00:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45206	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45460	02/04/23 09:57	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45212	02/01/23 14:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45299	02/04/23 03:35	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		1			44876	01/26/23 23:43	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: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

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

Method Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

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: Harrier 35 Federal Com 001H

Job ID: 890-3909-1
SDG: 03D2024093

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3909-1	PH04	Solid	01/19/23 11:00	01/20/23 09:06	1'
890-3909-2	PH04	Solid	01/19/23 11:10	01/20/23 09:06	3'
890-3909-3	PH04	Solid	01/19/23 11:20	01/20/23 09:06	6'

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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

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Work Order No: _____

Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817.683.2503	Email:	kjennings@ensolum.com

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:	Harrier 35 Federal Com 001H	Turn Around	
Project Number:	03D2024093	☑ Routine ☐ Rush	
Project Location:	Lea County, NM	Due Date:	
Sampler's Name:	Conner Shore	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT	Temp Blank: Yes No	Wet Ice: Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	T pen 007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.2
Total Containers:		Corrected Temperature:	4.0

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (8015)	Chlorides	BTEX (8021)
PH04	S	1.19.23	1100	1'	G	1		x	x	x
PH04	S	1.19.23	1110	3'	G	1		x	x	x
PH04	S	1.19.23	1120	6'	G	1		x	x	x

Sample Comments

Incident Number
NAPP2225531487

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
	Amanda Short	1-20-23 9:04			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-1107 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3909-1
Address: 1211 W Florida Ave	Due Date Requested: 1/26/2023			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Harrier 35 Federal Com 001H	Project #: 89000094			
Site	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N - None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
PH04 (890-3909-1)	1/19/23	11 00 Mountain		Solid			X	X	X	X	X	1	
PH04 (890-3909-2)	1/19/23	11 10 Mountain		Solid			X	X	X	X	X	1	
PH04 (890-3909-3)	1/19/23	11 20 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I, II, III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:		
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time	Company	Received by	Date/Time	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No		Cooler Temperature(s) °C and Other Remarks.		

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3909-1
SDG Number: 03D2024093

Login Number: 3909
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3909-1
SDG Number: 03D2024093

Login Number: 3909
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 01/23/23 07:42 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").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/4/2023 9:28:44 AM

JOB DESCRIPTION

Harrier 35 Federal Com 001H
SDG NUMBER 03D2024093

JOB NUMBER

890-3910-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

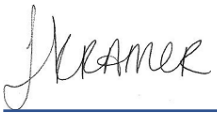
See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
2/4/2023 9:28:44 AM

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

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Laboratory Job ID: 890-3910-1
SDG: 03D2024093

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-3910-1
Project/Site: Harrier 35 Federal Com 001H SDG: 03D2024093

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
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: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

Job ID: 890-3910-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3910-1

Receipt
The samples were received on 1/20/2023 9:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH05 (890-3910-1), PH05 (890-3910-2) and PH05 (890-3910-3).

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

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

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

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

Client Sample ID: PH05

Lab Sample ID: 890-3910-1
Matrix: Solid
Date Collected: 01/19/23 13:00
Date Received: 01/20/23 09:06
Sample Depth: 1'

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		01/31/23 14:36	02/01/23 00:35	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/31/23 14:36	02/01/23 00:35	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/31/23 14:36	02/01/23 00:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/31/23 14:36	02/01/23 00:35	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/31/23 14:36	02/01/23 00:35	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/31/23 14:36	02/01/23 00:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*01/31/23 14:36*	*02/01/23 00:35*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*01/31/23 14:36*	*02/01/23 00:35*	*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			02/01/23 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			02/04/23 09:57	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		02/01/23 14:44	02/04/23 03:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 14:44	02/04/23 03:57	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 14:44	02/04/23 03:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*02/01/23 14:44*	*02/04/23 03:57*	*1*
o-Terphenyl	*100*		*70 - 130*	*02/01/23 14:44*	*02/04/23 03:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.01	U	5.01		mg/Kg			01/26/23 23:49	1

Client Sample ID: PH05

Lab Sample ID: 890-3910-2
Matrix: Solid
Date Collected: 01/19/23 13:10
Date Received: 01/20/23 09:06
Sample Depth: 3'

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		01/31/23 14:36	02/01/23 00:56	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/31/23 14:36	02/01/23 00:56	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/31/23 14:36	02/01/23 00:56	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		01/31/23 14:36	02/01/23 00:56	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/31/23 14:36	02/01/23 00:56	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		01/31/23 14:36	02/01/23 00:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*01/31/23 14:36*	*02/01/23 00:56*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

Client Sample ID: PH05

Date Collected: 01/19/23 13:10
Date Received: 01/20/23 09:06
Sample Depth: 3'

Lab Sample ID: 890-3910-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*01/31/23 14:36*	*02/01/23 00:56*	*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			02/01/23 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			02/04/23 09:57	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		02/01/23 14:44	02/04/23 04:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/01/23 14:44	02/04/23 04:18	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/01/23 14:44	02/04/23 04:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*02/01/23 14:44*	*02/04/23 04:18*	*1*
o-Terphenyl	*88*		*70 - 130*	*02/01/23 14:44*	*02/04/23 04:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14.0**		4.97	mg/Kg			01/26/23 23:55	1

Client Sample ID: PH05

Date Collected: 01/19/23 13:20
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3910-3
Matrix: Solid

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		01/31/23 14:36	02/01/23 01:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/31/23 14:36	02/01/23 01:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/31/23 14:36	02/01/23 01:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/31/23 14:36	02/01/23 01:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/31/23 14:36	02/01/23 01:16	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/31/23 14:36	02/01/23 01:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*01/31/23 14:36*	*02/01/23 01:16*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*01/31/23 14:36*	*02/01/23 01:16*	*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			02/01/23 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			02/04/23 09:57	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

Client Sample ID: PH05

Date Collected: 01/19/23 13:20
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3910-3

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	49.9		mg/Kg		02/01/23 14:44	02/04/23 04:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 14:44	02/04/23 04:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 14:44	02/04/23 04:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*02/01/23 14:44*	*02/04/23 04:40*	*1*
o-Terphenyl	*88*		*70 - 130*	*02/01/23 14:44*	*02/04/23 04:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**18.3**		4.98		mg/Kg			01/27/23 00:01	1

Surrogate Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

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

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-23952-A-1-B MS	Matrix Spike	97	112
880-23952-A-1-C MSD	Matrix Spike Duplicate	98	112
890-3910-1	PH05	112	118
890-3910-2	PH05	111	117
890-3910-3	PH05	115	115
LCS 880-45147/1-A	Lab Control Sample	94	112
LCSD 880-45147/2-A	Lab Control Sample Dup	99	113
MB 880-45147/5-A	Method Blank	102	105

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 (70-130)	OTPH1 (70-130)
890-3901-A-1-D MS	Matrix Spike	110	103
890-3901-A-1-E MSD	Matrix Spike Duplicate	123	104
890-3910-1	PH05	99	100
890-3910-2	PH05	82	88
890-3910-3	PH05	84	88
LCS 880-45212/2-A	Lab Control Sample	94	101
LCSD 880-45212/3-A	Lab Control Sample Dup	126	112
MB 880-45212/1-A	Method Blank	121	124

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45147/5-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45147

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:36	01/31/23 17:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:36	01/31/23 17:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*01/31/23 14:36*	*01/31/23 17:29*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*01/31/23 14:36*	*01/31/23 17:29*	*1*

Lab Sample ID: LCS 880-45147/1-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45147

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08233		mg/Kg		82	70 - 130		
Toluene			0.100	0.07766		mg/Kg		78	70 - 130		
Ethylbenzene			0.100	0.07484		mg/Kg		75	70 - 130		
m-Xylene & p-Xylene			0.200	0.1584		mg/Kg		79	70 - 130		
o-Xylene			0.100	0.07668		mg/Kg		77	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 880-45147/2-A
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45147

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09378		mg/Kg		94	70 - 130	13	35
Toluene			0.100	0.08580		mg/Kg		86	70 - 130	10	35
Ethylbenzene			0.100	0.08489		mg/Kg		85	70 - 130	13	35
m-Xylene & p-Xylene			0.200	0.1784		mg/Kg		89	70 - 130	12	35
o-Xylene			0.100	0.08543		mg/Kg		85	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-23952-A-1-B MS
Matrix: Solid
Analysis Batch: 45129

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.101	0.08219		mg/Kg		82	70 - 130		
Toluene	<0.00202	U	0.101	0.07762		mg/Kg		77	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

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

Lab Sample ID: 880-23952-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45129 — **Prep Batch: 45147**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.101	0.07334		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.202	0.1547		mg/Kg		77	70 - 130
o-Xylene	<0.00202	U	0.101	0.07303		mg/Kg		72	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-23952-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45129 — **Prep Batch: 45147**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.08613		mg/Kg		86	70 - 130	5	35
Toluene	<0.00202	U	0.0996	0.07815		mg/Kg		78	70 - 130	1	35
Ethylbenzene	<0.00202	U	0.0996	0.07266		mg/Kg		73	70 - 130	1	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1519		mg/Kg		76	70 - 130	2	35
o-Xylene	<0.00202	U	0.0996	0.07278		mg/Kg		73	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

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

Lab Sample ID: MB 880-45212/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45299 — **Prep Batch: 45212**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/01/23 14:44	02/03/23 19:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/01/23 14:44	02/03/23 19:59	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/01/23 14:44	02/03/23 19:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*02/01/23 14:44*	*02/03/23 19:59*	*1*
o-Terphenyl	*124*		*70 - 130*	*02/01/23 14:44*	*02/03/23 19:59*	*1*

Lab Sample ID: LCS 880-45212/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45299 — **Prep Batch: 45212**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	999	925.3		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	999	917.8		mg/Kg		92	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

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

Lab Sample ID: LCS 880-45212/2-A
Matrix: Solid
Analysis Batch: 45299

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45212

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-45212/3-A
Matrix: Solid
Analysis Batch: 45299

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45212

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			999	965.9		mg/Kg		97	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			999	1017		mg/Kg		102	70 - 130	10	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	126		70 - 130
o-Terphenyl	112		70 - 130

Lab Sample ID: 890-3901-A-1-D MS
Matrix: Solid
Analysis Batch: 45299

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45212

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1271		mg/Kg		126	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1072		mg/Kg		107	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 890-3901-A-1-E MSD
Matrix: Solid
Analysis Batch: 45299

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45212

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	998	1263		mg/Kg		125	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1068		mg/Kg		107	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	104		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44761/1-A
Matrix: Solid
Analysis Batch: 44876

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			01/26/23 20:56	1

Lab Sample ID: LCS 880-44761/2-A
Matrix: Solid
Analysis Batch: 44876

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	265.0		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-44761/3-A
Matrix: Solid
Analysis Batch: 44876

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	274.4		mg/Kg		110	90 - 110	3	20

Lab Sample ID: 890-3907-A-3-B MS
Matrix: Solid
Analysis Batch: 44876

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	18.6		250	289.2		mg/Kg		108	90 - 110		

Lab Sample ID: 890-3907-A-3-C MSD
Matrix: Solid
Analysis Batch: 44876

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	18.6		250	289.9		mg/Kg		109	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

GC VOA

Analysis Batch: 45129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3910-1	PH05	Total/NA	Solid	8021B	45147
890-3910-2	PH05	Total/NA	Solid	8021B	45147
890-3910-3	PH05	Total/NA	Solid	8021B	45147
MB 880-45147/5-A	Method Blank	Total/NA	Solid	8021B	45147
LCS 880-45147/1-A	Lab Control Sample	Total/NA	Solid	8021B	45147
LCSD 880-45147/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45147
880-23952-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	45147
880-23952-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45147

Prep Batch: 45147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3910-1	PH05	Total/NA	Solid	5035	
890-3910-2	PH05	Total/NA	Solid	5035	
890-3910-3	PH05	Total/NA	Solid	5035	
MB 880-45147/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45147/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45147/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23952-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-23952-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 45207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3910-1	PH05	Total/NA	Solid	Total BTEX	
890-3910-2	PH05	Total/NA	Solid	Total BTEX	
890-3910-3	PH05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3910-1	PH05	Total/NA	Solid	8015NM Prep	
890-3910-2	PH05	Total/NA	Solid	8015NM Prep	
890-3910-3	PH05	Total/NA	Solid	8015NM Prep	
MB 880-45212/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45212/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45212/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3901-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3901-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3910-1	PH05	Total/NA	Solid	8015B NM	45212
890-3910-2	PH05	Total/NA	Solid	8015B NM	45212
890-3910-3	PH05	Total/NA	Solid	8015B NM	45212
MB 880-45212/1-A	Method Blank	Total/NA	Solid	8015B NM	45212
LCS 880-45212/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45212
LCSD 880-45212/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45212
890-3901-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	45212
890-3901-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45212

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

GC Semi VOA

Analysis Batch: 45461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3910-1	PH05	Total/NA	Solid	8015 NM	
890-3910-2	PH05	Total/NA	Solid	8015 NM	
890-3910-3	PH05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3910-1	PH05	Soluble	Solid	DI Leach	
890-3910-2	PH05	Soluble	Solid	DI Leach	
890-3910-3	PH05	Soluble	Solid	DI Leach	
MB 880-44761/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44761/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44761/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3907-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3907-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3910-1	PH05	Soluble	Solid	300.0	44761
890-3910-2	PH05	Soluble	Solid	300.0	44761
890-3910-3	PH05	Soluble	Solid	300.0	44761
MB 880-44761/1-A	Method Blank	Soluble	Solid	300.0	44761
LCS 880-44761/2-A	Lab Control Sample	Soluble	Solid	300.0	44761
LCSD 880-44761/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44761
890-3907-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	44761
890-3907-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44761

Lab Chronicle

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

Client Sample ID: PH05

Lab Sample ID: 890-3910-1
Matrix: Solid
Date Collected: 01/19/23 13:00
Date Received: 01/20/23 09:06

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	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	02/01/23 00:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45207	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45461	02/04/23 09:57	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45212	02/01/23 14:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45299	02/04/23 03:57	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		1			44876	01/26/23 23:49	CH	EET MID

Client Sample ID: PH05

Lab Sample ID: 890-3910-2
Matrix: Solid
Date Collected: 01/19/23 13:10
Date Received: 01/20/23 09:06

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	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	02/01/23 00:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45207	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45461	02/04/23 09:57	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45212	02/01/23 14:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45299	02/04/23 04:18	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		1			44876	01/26/23 23:55	CH	EET MID

Client Sample ID: PH05

Lab Sample ID: 890-3910-3
Matrix: Solid
Date Collected: 01/19/23 13:20
Date Received: 01/20/23 09:06

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	45147	01/31/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45129	02/01/23 01:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45207	02/01/23 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			45461	02/04/23 09:57	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45212	02/01/23 14:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45299	02/04/23 04:40	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	44761	01/25/23 15:52	KS	EET MID
Soluble	Analysis	300.0		1			44876	01/27/23 00:01	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: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

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

Method Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

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: Harrier 35 Federal Com 001H

Job ID: 890-3910-1
SDG: 03D2024093

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3910-1	PH05	Solid	01/19/23 13:00	01/20/23 09:06	1'
890-3910-2	PH05	Solid	01/19/23 13:10	01/20/23 09:06	3'
890-3910-3	PH05	Solid	01/19/23 13:20	01/20/23 09:06	6'

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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: _____

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Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817.683.2503	Email:	kjennings@ensolum.com

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:	Harrier 35 Federal Com 001H	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024093	Due Date:	
Project Location:	Lea County, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
PO #:			

SAMPLE RECEIPT	Temp Blank: Yes No	Wet Ice: Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	IR-07
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	11.2
Total Containers:		Corrected Temperature:	4.0

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2S0_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (8015)	Chlorides	BTEX (8021)
PH05	S	1.19.23	1300	1'	G	1		x	x	x
PH05	S	1.19.23	1310	3'	G	1		x	x	x
PH05	S	1.19.23	1320	6'	G	1		x	x	x

890-3910 Chain of Custody

Sample Comments

Incident Number
NAPP2225531487

1.20.23

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		1-20 23 9:06			
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 890-1107 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3910-1
Address: 1211 W Florida Ave,	Due Date Requested: 1/26/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Harrier 35 Federal Com 001H	Project #: 89000094			
Site	SSOW#:			

Analysis Requested

Preservation Codes.

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
PH05 (890-3910-1)	1/19/23	13 00 Mountain		Solid			X	X	X	X	X	1	
PH05 (890-3910-2)	1/19/23	13 10 Mountain		Solid			X	X	X	X	X	1	
PH05 (890-3910-3)	1/19/23	13 20 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3910-1
SDG Number: 03D2024093

Login Number: 3910
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3910-1
SDG Number: 03D2024093

Login Number: 3910
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 01/23/23 07:42 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").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/3/2023 4:48:36 PM

JOB DESCRIPTION

Harrier 35 Federal Com 001H
SDG NUMBER 03D2024093

JOB NUMBER

890-3911-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

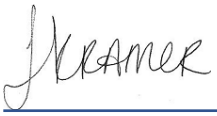
my EOL

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

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Laboratory Job ID: 890-3911-1
SDG: 03D2024093

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

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
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
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: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

Job ID: 890-3911-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3911-1

Receipt
The samples were received on 1/20/2023 9:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH06 (890-3911-1), PH06 (890-3911-2) and PH06 (890-3911-3).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-45146 and analytical batch 880-45131 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
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 880-44707 and analytical batch 880-44800 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: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

Client Sample ID: PH06

Lab Sample ID: 890-3911-1
Matrix: Solid
Date Collected: 01/19/23 13:30
Date Received: 01/20/23 09:06
Sample Depth: 1'

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		01/31/23 14:43	02/01/23 08:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 08:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 08:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:43	02/01/23 08:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 08:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:43	02/01/23 08:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*01/31/23 14:43*	*02/01/23 08:40*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*01/31/23 14:43*	*02/01/23 08:40*	*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			02/01/23 12:31	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			02/03/23 17:32	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		02/01/23 15:22	02/03/23 11:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/01/23 15:22	02/03/23 11:39	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/01/23 15:22	02/03/23 11:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*02/01/23 15:22*	*02/03/23 11:39*	*1*
o-Terphenyl	*80*		*70 - 130*	*02/01/23 15:22*	*02/03/23 11:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.96	U F1	4.96		mg/Kg			01/26/23 10:52	1

Client Sample ID: PH06

Lab Sample ID: 890-3911-2
Matrix: Solid
Date Collected: 01/19/23 13:40
Date Received: 01/20/23 09:06
Sample Depth: 3'

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		01/31/23 14:43	02/01/23 09:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 09:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 09:01	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/31/23 14:43	02/01/23 09:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 09:01	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/31/23 14:43	02/01/23 09:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*01/31/23 14:43*	*02/01/23 09:01*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

Client Sample ID: PH06

Date Collected: 01/19/23 13:40
Date Received: 01/20/23 09:06
Sample Depth: 3'

Lab Sample ID: 890-3911-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*01/31/23 14:43*	*02/01/23 09:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/01/23 12:31	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			02/03/23 17:32	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		02/01/23 15:22	02/03/23 12:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/01/23 15:22	02/03/23 12:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/01/23 15:22	02/03/23 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*02/01/23 15:22*	*02/03/23 12:43*	*1*
o-Terphenyl	*76*		*70 - 130*	*02/01/23 15:22*	*02/03/23 12:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**52.8**		5.04	mg/Kg			01/26/23 11:10	1

Client Sample ID: PH06

Date Collected: 01/19/23 13:50
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3911-3
Matrix: Solid

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		01/31/23 14:43	02/01/23 09:22	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/31/23 14:43	02/01/23 09:22	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/31/23 14:43	02/01/23 09:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/31/23 14:43	02/01/23 09:22	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/31/23 14:43	02/01/23 09:22	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/31/23 14:43	02/01/23 09:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*01/31/23 14:43*	*02/01/23 09:22*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*01/31/23 14:43*	*02/01/23 09:22*	*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			02/01/23 12:31	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			02/03/23 17:32	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

Client Sample ID: PH06
Date Collected: 01/19/23 13:50
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3911-3
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	<50.0	U	50.0		mg/Kg		02/01/23 15:22	02/03/23 13:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/01/23 15:22	02/03/23 13:04	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/01/23 15:22	02/03/23 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*02/01/23 15:22*	*02/03/23 13:04*	*1*
o-Terphenyl	*74*		*70 - 130*	*02/01/23 15:22*	*02/03/23 13:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.98**		4.97		mg/Kg			01/26/23 11:17	1

Surrogate Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3911-1	PH06	102	82
890-3911-2	PH06	108	83
890-3911-3	PH06	82	95
890-3920-A-1-B MS	Matrix Spike	106	100
890-3920-A-1-C MSD	Matrix Spike Duplicate	92	109
LCS 880-45149/1-A	Lab Control Sample	101	108
LCSD 880-45149/2-A	Lab Control Sample Dup	103	104
MB 880-45146/5-A	Method Blank	68 S1-	92
MB 880-45149/5-A	Method Blank	74	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3911-1	PH06	81	80
890-3911-1 MS	PH06	84	75
890-3911-1 MSD	PH06	87	75
890-3911-2	PH06	77	76
890-3911-3	PH06	75	74
LCS 880-45214/2-A	Lab Control Sample	87	84
LCSD 880-45214/3-A	Lab Control Sample Dup	87	84
MB 880-45214/1-A	Method Blank	96	102

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45146/5-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45146

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:29	01/31/23 17:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*01/31/23 14:29*	*01/31/23 17:14*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*01/31/23 14:29*	*01/31/23 17:14*	*1*

Lab Sample ID: MB 880-45149/5-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45149

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:43	02/01/23 03:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*01/31/23 14:43*	*02/01/23 03:51*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*01/31/23 14:43*	*02/01/23 03:51*	*1*

Lab Sample ID: LCS 880-45149/1-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45149

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1036		mg/Kg		104	70 - 130		
Toluene			0.100	0.09150		mg/Kg		92	70 - 130		
Ethylbenzene			0.100	0.09043		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1882		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09431		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-45149/2-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45149

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1062		mg/Kg		106	70 - 130	2	35

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

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

Lab Sample ID: LCSD 880-45149/2-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45149

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09716		mg/Kg		97	70 - 130	6	35
Ethylbenzene			0.100	0.09608		mg/Kg		96	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2004		mg/Kg		100	70 - 130	6	35
o-Xylene			0.100	0.1003		mg/Kg		100	70 - 130	6	35

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

Lab Sample ID: 890-3920-A-1-B MS
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45149

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.101	0.08904		mg/Kg		88	70 - 130
Toluene	<0.00202	U	0.101	0.08562		mg/Kg		85	70 - 130
Ethylbenzene	<0.00202	U	0.101	0.08420		mg/Kg		84	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.202	0.1762		mg/Kg		87	70 - 130
o-Xylene	<0.00202	U	0.101	0.08713		mg/Kg		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-3920-A-1-C MSD
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45149

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.1028		mg/Kg		103	70 - 130	14	35
Toluene	<0.00202	U	0.0996	0.08344		mg/Kg		84	70 - 130	3	35
Ethylbenzene	<0.00202	U	0.0996	0.07815		mg/Kg		78	70 - 130	7	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1543		mg/Kg		77	70 - 130	13	35
o-Xylene	<0.00202	U	0.0996	0.07563		mg/Kg		76	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

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

Lab Sample ID: MB 880-45214/1-A
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45214

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 09:09	1

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

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

Lab Sample ID: MB 880-45214/1-A
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45214

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 09:09	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 09:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/01/23 15:22*	*02/03/23 09:09*	*1*
o-Terphenyl	*102*		*70 - 130*	*02/01/23 15:22*	*02/03/23 09:09*	*1*

Lab Sample ID: LCS 880-45214/2-A
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45214

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			999	861.4		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)			999	983.6		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-45214/3-A
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45214

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			999	830.8		mg/Kg		83	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			999	938.1		mg/Kg		94	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: 890-3911-1 MS
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: PH06
Prep Type: Total/NA
Prep Batch: 45214

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	814.9		mg/Kg		78	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	956.9		mg/Kg		94	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

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

Lab Sample ID: 890-3911-1 MSD
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: PH06
Prep Type: Total/NA
Prep Batch: 45214

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	998	840.6		mg/Kg		81	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	972.0		mg/Kg		96	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44707/1-A
Matrix: Solid
Analysis Batch: 44800

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			01/26/23 09:07	1

Lab Sample ID: LCS 880-44707/2-A
Matrix: Solid
Analysis Batch: 44800

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	271.9		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-44707/3-A
Matrix: Solid
Analysis Batch: 44800

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	271.0		mg/Kg		108	90 - 110	0	20

Lab Sample ID: 890-3911-1 MS
Matrix: Solid
Analysis Batch: 44800

Client Sample ID: PH06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	<4.96	U F1	248	293.3	F1	mg/Kg		117	90 - 110		

Lab Sample ID: 890-3911-1 MSD
Matrix: Solid
Analysis Batch: 44800

Client Sample ID: PH06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	<4.96	U F1	248	293.7	F1	mg/Kg		117	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

GC VOA

Analysis Batch: 45131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3911-1	PH06	Total/NA	Solid	8021B	45149
890-3911-2	PH06	Total/NA	Solid	8021B	45149
890-3911-3	PH06	Total/NA	Solid	8021B	45149
MB 880-45146/5-A	Method Blank	Total/NA	Solid	8021B	45146
MB 880-45149/5-A	Method Blank	Total/NA	Solid	8021B	45149
LCS 880-45149/1-A	Lab Control Sample	Total/NA	Solid	8021B	45149
LCSD 880-45149/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45149
890-3920-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	45149
890-3920-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45149

Prep Batch: 45146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-45146/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 45149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3911-1	PH06	Total/NA	Solid	5035	
890-3911-2	PH06	Total/NA	Solid	5035	
890-3911-3	PH06	Total/NA	Solid	5035	
MB 880-45149/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45149/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45149/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3920-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-3920-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 45198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3911-1	PH06	Total/NA	Solid	Total BTEX	
890-3911-2	PH06	Total/NA	Solid	Total BTEX	
890-3911-3	PH06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3911-1	PH06	Total/NA	Solid	8015NM Prep	
890-3911-2	PH06	Total/NA	Solid	8015NM Prep	
890-3911-3	PH06	Total/NA	Solid	8015NM Prep	
MB 880-45214/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45214/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45214/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3911-1 MS	PH06	Total/NA	Solid	8015NM Prep	
890-3911-1 MSD	PH06	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3911-1	PH06	Total/NA	Solid	8015B NM	45214
890-3911-2	PH06	Total/NA	Solid	8015B NM	45214
890-3911-3	PH06	Total/NA	Solid	8015B NM	45214
MB 880-45214/1-A	Method Blank	Total/NA	Solid	8015B NM	45214
LCS 880-45214/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45214

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

GC Semi VOA (Continued)

Analysis Batch: 45303 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-45214/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45214
890-3911-1 MS	PH06	Total/NA	Solid	8015B NM	45214
890-3911-1 MSD	PH06	Total/NA	Solid	8015B NM	45214

Analysis Batch: 45427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3911-1	PH06	Total/NA	Solid	8015 NM	
890-3911-2	PH06	Total/NA	Solid	8015 NM	
890-3911-3	PH06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3911-1	PH06	Soluble	Solid	DI Leach	
890-3911-2	PH06	Soluble	Solid	DI Leach	
890-3911-3	PH06	Soluble	Solid	DI Leach	
MB 880-44707/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44707/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44707/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3911-1 MS	PH06	Soluble	Solid	DI Leach	
890-3911-1 MSD	PH06	Soluble	Solid	DI Leach	

Analysis Batch: 44800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3911-1	PH06	Soluble	Solid	300.0	44707
890-3911-2	PH06	Soluble	Solid	300.0	44707
890-3911-3	PH06	Soluble	Solid	300.0	44707
MB 880-44707/1-A	Method Blank	Soluble	Solid	300.0	44707
LCS 880-44707/2-A	Lab Control Sample	Soluble	Solid	300.0	44707
LCSD 880-44707/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44707
890-3911-1 MS	PH06	Soluble	Solid	300.0	44707
890-3911-1 MSD	PH06	Soluble	Solid	300.0	44707

Lab Chronicle

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

Client Sample ID: PH06

Lab Sample ID: 890-3911-1
Matrix: Solid
Date Collected: 01/19/23 13:30
Date Received: 01/20/23 09:06

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	45149	01/31/23 14:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45131	02/01/23 08:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45198	02/01/23 12:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			45427	02/03/23 17:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	45214	02/01/23 15:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45303	02/03/23 11:39	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	44707	01/25/23 09:29	KS	EET MID
Soluble	Analysis	300.0		1			44800	01/26/23 10:52	CH	EET MID

Client Sample ID: PH06

Lab Sample ID: 890-3911-2
Matrix: Solid
Date Collected: 01/19/23 13:40
Date Received: 01/20/23 09:06

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	45149	01/31/23 14:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45131	02/01/23 09:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45198	02/01/23 12:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			45427	02/03/23 17:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45214	02/01/23 15:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45303	02/03/23 12:43	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	44707	01/25/23 09:29	KS	EET MID
Soluble	Analysis	300.0		1			44800	01/26/23 11:10	CH	EET MID

Client Sample ID: PH06

Lab Sample ID: 890-3911-3
Matrix: Solid
Date Collected: 01/19/23 13:50
Date Received: 01/20/23 09:06

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	45149	01/31/23 14:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45131	02/01/23 09:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45198	02/01/23 12:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			45427	02/03/23 17:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45214	02/01/23 15:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45303	02/03/23 13:04	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	44707	01/25/23 09:29	KS	EET MID
Soluble	Analysis	300.0		1			44800	01/26/23 11:17	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

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

Method Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

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: Harrier 35 Federal Com 001H

Job ID: 890-3911-1
SDG: 03D2024093

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3911-1	PH06	Solid	01/19/23 13:30	01/20/23 09:06	1'
890-3911-2	PH06	Solid	01/19/23 13:40	01/20/23 09:06	3'
890-3911-3	PH06	Solid	01/19/23 13:50	01/20/23 09:06	6'

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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: _____

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Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817.683.2503	Email:	kjennings@ensolum.com

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:	Harrier 35 Federal Com 001H	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024093	Due Date:	
Project Location:	Lea County, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TMM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	11.2
Total Containers:		Corrected Temperature:	4.0

Preservative Codes

None: NO — DI Water: H_2O
Cool: Cool — MeOH: Me
HCL: HC — HNO_3: HN
H_2SO_4: H_2 — NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (8015)	Chlorides	BTEX (8021)
PH06	S	1.19.23	1330	1'	G	1		x	x	x
PH06	S	1.19.23	1340	3'	G	1		x	x	x
PH06	S	1.19.23	1350	6'	G	1		x	x	x

890-3911 Chain of Custody

Sample Comments

Incident Number
NAPP2225531487

1.20.23

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		1.20.23 906			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220
Phone 575-988-3199 Fax. 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-1107 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3911-1
Address: 1211 W Florida Ave, ,	Due Date Requested: 1/26/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Harrier 35 Federal Com 001H	Project #: 89000094			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Y	Trizma
		Z	other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
PH06 (890-3911-1)	1/19/23	13 30 Mountain		Solid			X	X	X	X	X	1	
PH06 (890-3911-2)	1/19/23	13 40 Mountain		Solid			X	X	X	X	X	1	
PH06 (890-3911-3)	1/19/23	13 50 Mountain		Solid			X	X	X	X	X	1	

Note Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3911-1
SDG Number: 03D2024093

Login Number: 3911
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3911-1
SDG Number: 03D2024093

Login Number: 3911
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 01/23/23 07:42 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").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/3/2023 4:48:32 PM

JOB DESCRIPTION

Harrier 35 Federal Com 001H
SDG NUMBER 03D2024093

JOB NUMBER

890-3912-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

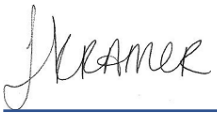
my EOL

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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2/3/2023 4:48:32 PM

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

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Laboratory Job ID: 890-3912-1
SDG: 03D2024093

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

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
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
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: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

Job ID: 890-3912-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3912-1

Receipt
The samples were received on 1/20/2023 9:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH07 (890-3912-1), PH07 (890-3912-2) and PH07 (890-3912-3).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-45146 and analytical batch 880-45131 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
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 880-44760 and analytical batch 880-44877 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: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

Client Sample ID: PH07

Lab Sample ID: 890-3912-1
Matrix: Solid
Date Collected: 01/19/23 14:00
Date Received: 01/20/23 09:06
Sample Depth: 1'

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		01/31/23 14:43	02/01/23 09:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 09:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 09:42	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/31/23 14:43	02/01/23 09:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 09:42	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/31/23 14:43	02/01/23 09:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*01/31/23 14:43*	*02/01/23 09:42*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*01/31/23 14:43*	*02/01/23 09:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/01/23 12:31	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			02/03/23 17:32	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		02/01/23 15:22	02/03/23 13:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/01/23 15:22	02/03/23 13:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/01/23 15:22	02/03/23 13:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*02/01/23 15:22*	*02/03/23 13:25*	*1*
o-Terphenyl	*75*		*70 - 130*	*02/01/23 15:22*	*02/03/23 13:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.6**	**F1**	5.02		mg/Kg			01/27/23 18:47	1

Client Sample ID: PH07

Lab Sample ID: 890-3912-2
Matrix: Solid
Date Collected: 01/19/23 14:10
Date Received: 01/20/23 09:06
Sample Depth: 3'

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		01/31/23 14:43	02/01/23 10:03	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/31/23 14:43	02/01/23 10:03	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/31/23 14:43	02/01/23 10:03	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		01/31/23 14:43	02/01/23 10:03	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/31/23 14:43	02/01/23 10:03	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		01/31/23 14:43	02/01/23 10:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*01/31/23 14:43*	*02/01/23 10:03*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

Client Sample ID: PH07

Date Collected: 01/19/23 14:10
Date Received: 01/20/23 09:06
Sample Depth: 3'

Lab Sample ID: 890-3912-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*01/31/23 14:43*	*02/01/23 10:03*	*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			02/01/23 12:31	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			02/03/23 17:32	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		02/01/23 15:22	02/03/23 13:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/01/23 15:22	02/03/23 13:45	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/01/23 15:22	02/03/23 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*02/01/23 15:22*	*02/03/23 13:45*	*1*
o-Terphenyl	*77*		*70 - 130*	*02/01/23 15:22*	*02/03/23 13:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**112**		4.97	mg/Kg			01/27/23 19:01	1

Client Sample ID: PH07

Date Collected: 01/19/23 14:20
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3912-3

Matrix: Solid

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		01/31/23 14:43	02/01/23 10:23	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/31/23 14:43	02/01/23 10:23	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/31/23 14:43	02/01/23 10:23	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		01/31/23 14:43	02/01/23 10:23	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/31/23 14:43	02/01/23 10:23	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		01/31/23 14:43	02/01/23 10:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*01/31/23 14:43*	*02/01/23 10:23*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*01/31/23 14:43*	*02/01/23 10:23*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			02/01/23 12:31	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			02/03/23 17:32	1

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

Client Sample ID: PH07

Date Collected: 01/19/23 14:20
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3912-3

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	49.9		mg/Kg		02/01/23 15:22	02/03/23 14:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 14:06	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*02/01/23 15:22*	*02/03/23 14:06*	*1*
o-Terphenyl	*95*		*70 - 130*	*02/01/23 15:22*	*02/03/23 14:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.03**		4.99		mg/Kg			01/27/23 19:06	1

Surrogate Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3912-1	PH07	93	88
890-3912-2	PH07	88	93
890-3912-3	PH07	91	96
890-3920-A-1-B MS	Matrix Spike	106	100
890-3920-A-1-C MSD	Matrix Spike Duplicate	92	109
LCS 880-45149/1-A	Lab Control Sample	101	108
LCSD 880-45149/2-A	Lab Control Sample Dup	103	104
MB 880-45146/5-A	Method Blank	68 S1-	92
MB 880-45149/5-A	Method Blank	74	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3911-A-1-F MS	Matrix Spike	84	75
890-3911-A-1-G MSD	Matrix Spike Duplicate	87	75
890-3912-1	PH07	76	75
890-3912-2	PH07	77	77
890-3912-3	PH07	93	95
LCS 880-45214/2-A	Lab Control Sample	87	84
LCSD 880-45214/3-A	Lab Control Sample Dup	87	84
MB 880-45214/1-A	Method Blank	96	102

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45146/5-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45146

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:29	01/31/23 17:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*01/31/23 14:29*	*01/31/23 17:14*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*01/31/23 14:29*	*01/31/23 17:14*	*1*

Lab Sample ID: MB 880-45149/5-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45149

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:43	02/01/23 03:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*01/31/23 14:43*	*02/01/23 03:51*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*01/31/23 14:43*	*02/01/23 03:51*	*1*

Lab Sample ID: LCS 880-45149/1-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45149

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1036		mg/Kg		104	70 - 130		
Toluene			0.100	0.09150		mg/Kg		92	70 - 130		
Ethylbenzene			0.100	0.09043		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1882		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09431		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-45149/2-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45149

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1062		mg/Kg		106	70 - 130	2	35

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

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

Lab Sample ID: LCSD 880-45149/2-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45149

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09716		mg/Kg		97	70 - 130	6	35
Ethylbenzene			0.100	0.09608		mg/Kg		96	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2004		mg/Kg		100	70 - 130	6	35
o-Xylene			0.100	0.1003		mg/Kg		100	70 - 130	6	35

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

Lab Sample ID: 890-3920-A-1-B MS
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45149

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.101	0.08904		mg/Kg		88	70 - 130
Toluene	<0.00202	U	0.101	0.08562		mg/Kg		85	70 - 130
Ethylbenzene	<0.00202	U	0.101	0.08420		mg/Kg		84	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.202	0.1762		mg/Kg		87	70 - 130
o-Xylene	<0.00202	U	0.101	0.08713		mg/Kg		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-3920-A-1-C MSD
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45149

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.1028		mg/Kg		103	70 - 130	14	35
Toluene	<0.00202	U	0.0996	0.08344		mg/Kg		84	70 - 130	3	35
Ethylbenzene	<0.00202	U	0.0996	0.07815		mg/Kg		78	70 - 130	7	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1543		mg/Kg		77	70 - 130	13	35
o-Xylene	<0.00202	U	0.0996	0.07563		mg/Kg		76	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

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

Lab Sample ID: MB 880-45214/1-A
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45214

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 09:09	1

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

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

Lab Sample ID: MB 880-45214/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45303 — **Prep Batch: 45214**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 09:09	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 09:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/01/23 15:22*	*02/03/23 09:09*	*1*
o-Terphenyl	*102*		*70 - 130*	*02/01/23 15:22*	*02/03/23 09:09*	*1*

Lab Sample ID: LCS 880-45214/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45303 — **Prep Batch: 45214**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			999	861.4		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)			999	983.6		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-45214/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45303 — **Prep Batch: 45214**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			999	830.8		mg/Kg		83	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			999	938.1		mg/Kg		94	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: 890-3911-A-1-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45303 — **Prep Batch: 45214**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	814.9		mg/Kg		78	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	956.9		mg/Kg		94	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

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

Lab Sample ID: 890-3911-A-1-G MSD
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45214

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	998	840.6		mg/Kg		81	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	972.0		mg/Kg		96	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44760/1-A
Matrix: Solid
Analysis Batch: 44877

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			01/27/23 18:33	1

Lab Sample ID: LCS 880-44760/2-A
Matrix: Solid
Analysis Batch: 44877

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	273.5		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-44760/3-A
Matrix: Solid
Analysis Batch: 44877

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	274.9		mg/Kg		110	90 - 110	1	20

Lab Sample ID: 890-3912-1 MS
Matrix: Solid
Analysis Batch: 44877

Client Sample ID: PH07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	21.6	F1	251	308.8	F1	mg/Kg		114	90 - 110		

Lab Sample ID: 890-3912-1 MSD
Matrix: Solid
Analysis Batch: 44877

Client Sample ID: PH07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	21.6	F1	251	309.6	F1	mg/Kg		115	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

GC VOA

Analysis Batch: 45131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3912-1	PH07	Total/NA	Solid	8021B	45149
890-3912-2	PH07	Total/NA	Solid	8021B	45149
890-3912-3	PH07	Total/NA	Solid	8021B	45149
MB 880-45146/5-A	Method Blank	Total/NA	Solid	8021B	45146
MB 880-45149/5-A	Method Blank	Total/NA	Solid	8021B	45149
LCS 880-45149/1-A	Lab Control Sample	Total/NA	Solid	8021B	45149
LCSD 880-45149/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45149
890-3920-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	45149
890-3920-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45149

Prep Batch: 45146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-45146/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 45149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3912-1	PH07	Total/NA	Solid	5035	
890-3912-2	PH07	Total/NA	Solid	5035	
890-3912-3	PH07	Total/NA	Solid	5035	
MB 880-45149/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45149/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45149/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3920-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-3920-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 45199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3912-1	PH07	Total/NA	Solid	Total BTEX	
890-3912-2	PH07	Total/NA	Solid	Total BTEX	
890-3912-3	PH07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3912-1	PH07	Total/NA	Solid	8015NM Prep	
890-3912-2	PH07	Total/NA	Solid	8015NM Prep	
890-3912-3	PH07	Total/NA	Solid	8015NM Prep	
MB 880-45214/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45214/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45214/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3911-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3911-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3912-1	PH07	Total/NA	Solid	8015B NM	45214
890-3912-2	PH07	Total/NA	Solid	8015B NM	45214
890-3912-3	PH07	Total/NA	Solid	8015B NM	45214
MB 880-45214/1-A	Method Blank	Total/NA	Solid	8015B NM	45214
LCS 880-45214/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45214

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

GC Semi VOA (Continued)

Analysis Batch: 45303 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-45214/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45214
890-3911-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	45214
890-3911-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45214

Analysis Batch: 45428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3912-1	PH07	Total/NA	Solid	8015 NM	
890-3912-2	PH07	Total/NA	Solid	8015 NM	
890-3912-3	PH07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3912-1	PH07	Soluble	Solid	DI Leach	
890-3912-2	PH07	Soluble	Solid	DI Leach	
890-3912-3	PH07	Soluble	Solid	DI Leach	
MB 880-44760/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44760/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44760/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3912-1 MS	PH07	Soluble	Solid	DI Leach	
890-3912-1 MSD	PH07	Soluble	Solid	DI Leach	

Analysis Batch: 44877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3912-1	PH07	Soluble	Solid	300.0	44760
890-3912-2	PH07	Soluble	Solid	300.0	44760
890-3912-3	PH07	Soluble	Solid	300.0	44760
MB 880-44760/1-A	Method Blank	Soluble	Solid	300.0	44760
LCS 880-44760/2-A	Lab Control Sample	Soluble	Solid	300.0	44760
LCSD 880-44760/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44760
890-3912-1 MS	PH07	Soluble	Solid	300.0	44760
890-3912-1 MSD	PH07	Soluble	Solid	300.0	44760

Lab Chronicle

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

Client Sample ID: PH07

Lab Sample ID: 890-3912-1
Matrix: Solid
Date Collected: 01/19/23 14:00
Date Received: 01/20/23 09:06

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	45149	01/31/23 14:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45131	02/01/23 09:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45199	02/01/23 12:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			45428	02/03/23 17:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45214	02/01/23 15:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45303	02/03/23 13:25	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	44760	01/25/23 15:51	KS	EET MID
Soluble	Analysis	300.0		1			44877	01/27/23 18:47	CH	EET MID

Client Sample ID: PH07

Lab Sample ID: 890-3912-2
Matrix: Solid
Date Collected: 01/19/23 14:10
Date Received: 01/20/23 09:06

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	45149	01/31/23 14:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45131	02/01/23 10:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45199	02/01/23 12:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			45428	02/03/23 17:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45214	02/01/23 15:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45303	02/03/23 13:45	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	44760	01/25/23 15:51	KS	EET MID
Soluble	Analysis	300.0		1			44877	01/27/23 19:01	CH	EET MID

Client Sample ID: PH07

Lab Sample ID: 890-3912-3
Matrix: Solid
Date Collected: 01/19/23 14:20
Date Received: 01/20/23 09:06

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	45149	01/31/23 14:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45131	02/01/23 10:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45199	02/01/23 12:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			45428	02/03/23 17:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45214	02/01/23 15:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45303	02/03/23 14:06	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	44760	01/25/23 15:51	KS	EET MID
Soluble	Analysis	300.0		1			44877	01/27/23 19:06	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: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

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

Method Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

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: Harrier 35 Federal Com 001H

Job ID: 890-3912-1
SDG: 03D2024093

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3912-1	PH07	Solid	01/19/23 14:00	01/20/23 09:06	1'
890-3912-2	PH07	Solid	01/19/23 14:10	01/20/23 09:06	3'
890-3912-3	PH07	Solid	01/19/23 14:20	01/20/23 09:06	6'

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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: _____

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Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817.683.2503	Email:	kjennings@ensolum.com

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:	Harrier 35 Federal Com 001H	Turn Around	
Project Number:	03D2024093	☑ Routine ☐ Rush	
Project Location:	Lea County, NM	Due Date:	
Sampler's Name:	Conner Shore	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice: (Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	THM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.2
Total Containers:		Corrected Temperature:	4.0

Preservative Codes

None: NO; DI Water: H_2O
Cool: Cool; MeOH: Me
HCL: HC; HNO_3: HN
H_2S0_4: H_2; NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH (8015)	Chlorides	BTEX (8021)	Sample Comments
PH07	S	1.19.23	1400	1'	G	1		x	x	x	
PH07	S	1.19.23	1410	3'	G	1		x	x	x	
PH07	S	1.19.23	1420	6'	G	1		x	x	x	

890-3912 Chain of Custody

Incident Number
NAPP2225531487

1.20.23

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl 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 Tl 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
1		1-20-23 906			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No.: 890-1107 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3912-1
Address: 1211 W Florida Ave, ,	Due Date Requested: 1/26/2023			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Harrier 35 Federal Com 001H	Project #: 89000094			
Site:	SSOW#:			

Analysis Requested

Preservation Codes.

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
PH07 (890-3912-1)	1/19/23	14 00 Mountain		Solid			X	X	X	X	X	1	
PH07 (890-3912-2)	1/19/23	14 10 Mountain		Solid			X	X	X	X	X	1	
PH07 (890-3912-3)	1/19/23	14 20 Mountain		Solid			X	X	X	X	X	1	

Note Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II, III, IV, Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time:	Company
Relinquished by	Date/Time.	Company	Received by	Date/Time	Company
Relinquished by	Date/Time:	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3912-1
SDG Number: 03D2024093

Login Number: 3912
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3912-1
SDG Number: 03D2024093

Login Number: 3912
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 01/23/23 07:42 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").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/3/2023 4:48:59 PM

JOB DESCRIPTION

Harrier 35 Federal Com 001H
SDG NUMBER 03D2024093

JOB NUMBER

890-3913-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

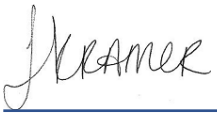
my EOL

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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2/3/2023 4:48:59 PM

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

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Laboratory Job ID: 890-3913-1
SDG: 03D2024093

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

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
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
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: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

Job ID: 890-3913-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3913-1

Receipt
The samples were received on 1/20/2023 9:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

Receipt Exceptions
The following samples analyzed for method <FRACTION_METHOD> were received and analyzed from an unpreserved bulk soil jar: PH08 (890-3913-1), PH08 (890-3913-2) and PH08 (890-3913-3).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-45146 and analytical batch 880-45131 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
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 880-44760 and analytical batch 880-44877 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: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

Client Sample ID: PH08

Date Collected: 01/19/23 14:25
Date Received: 01/20/23 09:06
Sample Depth: 1'

Lab Sample ID: 890-3913-1
Matrix: Solid

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		01/31/23 14:43	02/01/23 10:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 10:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 10:44	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/31/23 14:43	02/01/23 10:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 10:44	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/31/23 14:43	02/01/23 10:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*01/31/23 14:43*	*02/01/23 10:44*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*01/31/23 14:43*	*02/01/23 10:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/01/23 12:31	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			02/03/23 17:32	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		02/01/23 15:22	02/03/23 14:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 14:28	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*02/01/23 15:22*	*02/03/23 14:28*	*1*
o-Terphenyl	*74*		*70 - 130*	*02/01/23 15:22*	*02/03/23 14:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.05	U	5.05		mg/Kg			01/27/23 19:11	1

Client Sample ID: PH08

Date Collected: 01/19/23 14:30
Date Received: 01/20/23 09:06
Sample Depth: 3'

Lab Sample ID: 890-3913-2
Matrix: Solid

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		01/31/23 14:43	02/01/23 11:04	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/31/23 14:43	02/01/23 11:04	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/31/23 14:43	02/01/23 11:04	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/31/23 14:43	02/01/23 11:04	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/31/23 14:43	02/01/23 11:04	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/31/23 14:43	02/01/23 11:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*01/31/23 14:43*	*02/01/23 11:04*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

Client Sample ID: PH08

Date Collected: 01/19/23 14:30
Date Received: 01/20/23 09:06
Sample Depth: 3'

Lab Sample ID: 890-3913-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*01/31/23 14:43*	*02/01/23 11:04*	*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			02/01/23 12:31	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			02/03/23 17:32	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		02/01/23 15:22	02/03/23 14:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 14:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*02/01/23 15:22*	*02/03/23 14:48*	*1*
o-Terphenyl	*75*		*70 - 130*	*02/01/23 15:22*	*02/03/23 14:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.5**		5.04		mg/Kg			01/27/23 19:16	1

Client Sample ID: PH08

Date Collected: 01/19/23 14:35
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3913-3
Matrix: Solid

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		01/31/23 14:43	02/01/23 11:25	1
Toluene	<0.00202	U	0.00202		mg/Kg		01/31/23 14:43	02/01/23 11:25	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		01/31/23 14:43	02/01/23 11:25	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		01/31/23 14:43	02/01/23 11:25	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		01/31/23 14:43	02/01/23 11:25	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		01/31/23 14:43	02/01/23 11:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*01/31/23 14:43*	*02/01/23 11:25*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*01/31/23 14:43*	*02/01/23 11:25*	*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			02/01/23 12:31	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			02/03/23 17:32	1

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Client Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

Client Sample ID: PH08
Date Collected: 01/19/23 14:35
Date Received: 01/20/23 09:06
Sample Depth: 6'

Lab Sample ID: 890-3913-3
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	49.9		mg/Kg		02/01/23 15:22	02/03/23 15:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 15:09	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 15:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*02/01/23 15:22*	*02/03/23 15:09*	*1*
o-Terphenyl	*74*		*70 - 130*	*02/01/23 15:22*	*02/03/23 15:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**105**		5.00		mg/Kg			01/27/23 19:30	1

Surrogate Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3913-1	PH08	80	91
890-3913-2	PH08	84	95
890-3913-3	PH08	83	95
890-3920-A-1-B MS	Matrix Spike	106	100
890-3920-A-1-C MSD	Matrix Spike Duplicate	92	109
LCS 880-45149/1-A	Lab Control Sample	101	108
LCSD 880-45149/2-A	Lab Control Sample Dup	103	104
MB 880-45146/5-A	Method Blank	68 S1-	92
MB 880-45149/5-A	Method Blank	74	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3911-A-1-F MS	Matrix Spike	84	75
890-3911-A-1-G MSD	Matrix Spike Duplicate	87	75
890-3913-1	PH08	74	74
890-3913-2	PH08	77	75
890-3913-3	PH08	77	74
LCS 880-45214/2-A	Lab Control Sample	87	84
LCSD 880-45214/3-A	Lab Control Sample Dup	87	84
MB 880-45214/1-A	Method Blank	96	102

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45146/5-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45146

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:29	01/31/23 17:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:29	01/31/23 17:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*01/31/23 14:29*	*01/31/23 17:14*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*01/31/23 14:29*	*01/31/23 17:14*	*1*

Lab Sample ID: MB 880-45149/5-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45149

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/31/23 14:43	02/01/23 03:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/31/23 14:43	02/01/23 03:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*01/31/23 14:43*	*02/01/23 03:51*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*01/31/23 14:43*	*02/01/23 03:51*	*1*

Lab Sample ID: LCS 880-45149/1-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45149

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1036		mg/Kg		104	70 - 130		
Toluene			0.100	0.09150		mg/Kg		92	70 - 130		
Ethylbenzene			0.100	0.09043		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1882		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09431		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-45149/2-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45149

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1062		mg/Kg		106	70 - 130	2	35

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

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

Lab Sample ID: LCSD 880-45149/2-A
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45149

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09716		mg/Kg		97	70 - 130	6	35
Ethylbenzene			0.100	0.09608		mg/Kg		96	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2004		mg/Kg		100	70 - 130	6	35
o-Xylene			0.100	0.1003		mg/Kg		100	70 - 130	6	35

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

Lab Sample ID: 890-3920-A-1-B MS
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45149

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.101	0.08904		mg/Kg		88	70 - 130
Toluene	<0.00202	U	0.101	0.08562		mg/Kg		85	70 - 130
Ethylbenzene	<0.00202	U	0.101	0.08420		mg/Kg		84	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.202	0.1762		mg/Kg		87	70 - 130
o-Xylene	<0.00202	U	0.101	0.08713		mg/Kg		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-3920-A-1-C MSD
Matrix: Solid
Analysis Batch: 45131

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45149

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.1028		mg/Kg		103	70 - 130	14	35
Toluene	<0.00202	U	0.0996	0.08344		mg/Kg		84	70 - 130	3	35
Ethylbenzene	<0.00202	U	0.0996	0.07815		mg/Kg		78	70 - 130	7	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1543		mg/Kg		77	70 - 130	13	35
o-Xylene	<0.00202	U	0.0996	0.07563		mg/Kg		76	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

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

Lab Sample ID: MB 880-45214/1-A
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45214

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 09:09	1

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QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

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

Lab Sample ID: MB 880-45214/1-A
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45214

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 09:09	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/01/23 15:22	02/03/23 09:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/01/23 15:22*	*02/03/23 09:09*	*1*
o-Terphenyl	*102*		*70 - 130*	*02/01/23 15:22*	*02/03/23 09:09*	*1*

Lab Sample ID: LCS 880-45214/2-A
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45214

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			999	861.4		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)			999	983.6		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-45214/3-A
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45214

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			999	830.8		mg/Kg		83	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			999	938.1		mg/Kg		94	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: 890-3911-A-1-F MS
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45214

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	814.9		mg/Kg		78	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	956.9		mg/Kg		94	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

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

Lab Sample ID: 890-3911-A-1-G MSD
Matrix: Solid
Analysis Batch: 45303

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45214

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	998	840.6		mg/Kg		81	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	972.0		mg/Kg		96	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44760/1-A
Matrix: Solid
Analysis Batch: 44877

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			01/27/23 18:33	1

Lab Sample ID: LCS 880-44760/2-A
Matrix: Solid
Analysis Batch: 44877

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	273.5		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-44760/3-A
Matrix: Solid
Analysis Batch: 44877

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	274.9		mg/Kg		110	90 - 110	1	20

Lab Sample ID: 890-3912-A-1-B MS
Matrix: Solid
Analysis Batch: 44877

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	21.6	F1	251	308.8	F1	mg/Kg		114	90 - 110		

Lab Sample ID: 890-3912-A-1-C MSD
Matrix: Solid
Analysis Batch: 44877

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	21.6	F1	251	309.6	F1	mg/Kg		115	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

GC VOA

Analysis Batch: 45131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3913-1	PH08	Total/NA	Solid	8021B	45149
890-3913-2	PH08	Total/NA	Solid	8021B	45149
890-3913-3	PH08	Total/NA	Solid	8021B	45149
MB 880-45146/5-A	Method Blank	Total/NA	Solid	8021B	45146
MB 880-45149/5-A	Method Blank	Total/NA	Solid	8021B	45149
LCS 880-45149/1-A	Lab Control Sample	Total/NA	Solid	8021B	45149
LCSD 880-45149/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45149
890-3920-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	45149
890-3920-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45149

Prep Batch: 45146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-45146/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 45149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3913-1	PH08	Total/NA	Solid	5035	
890-3913-2	PH08	Total/NA	Solid	5035	
890-3913-3	PH08	Total/NA	Solid	5035	
MB 880-45149/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45149/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45149/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3920-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-3920-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 45200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3913-1	PH08	Total/NA	Solid	Total BTEX	
890-3913-2	PH08	Total/NA	Solid	Total BTEX	
890-3913-3	PH08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3913-1	PH08	Total/NA	Solid	8015NM Prep	
890-3913-2	PH08	Total/NA	Solid	8015NM Prep	
890-3913-3	PH08	Total/NA	Solid	8015NM Prep	
MB 880-45214/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45214/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45214/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3911-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3911-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3913-1	PH08	Total/NA	Solid	8015B NM	45214
890-3913-2	PH08	Total/NA	Solid	8015B NM	45214
890-3913-3	PH08	Total/NA	Solid	8015B NM	45214
MB 880-45214/1-A	Method Blank	Total/NA	Solid	8015B NM	45214
LCS 880-45214/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45214

QC Association Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

GC Semi VOA (Continued)

Analysis Batch: 45303 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-45214/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45214
890-3911-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	45214
890-3911-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45214

Analysis Batch: 45429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3913-1	PH08	Total/NA	Solid	8015 NM	
890-3913-2	PH08	Total/NA	Solid	8015 NM	
890-3913-3	PH08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3913-1	PH08	Soluble	Solid	DI Leach	
890-3913-2	PH08	Soluble	Solid	DI Leach	
890-3913-3	PH08	Soluble	Solid	DI Leach	
MB 880-44760/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44760/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44760/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3912-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3912-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3913-1	PH08	Soluble	Solid	300.0	44760
890-3913-2	PH08	Soluble	Solid	300.0	44760
890-3913-3	PH08	Soluble	Solid	300.0	44760
MB 880-44760/1-A	Method Blank	Soluble	Solid	300.0	44760
LCS 880-44760/2-A	Lab Control Sample	Soluble	Solid	300.0	44760
LCSD 880-44760/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44760
890-3912-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	44760
890-3912-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44760

Lab Chronicle

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

Client Sample ID: PH08

Lab Sample ID: 890-3913-1
Matrix: Solid
Date Collected: 01/19/23 14:25
Date Received: 01/20/23 09:06

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	45149	01/31/23 14:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45131	02/01/23 10:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45200	02/01/23 12:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			45429	02/03/23 17:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45214	02/01/23 15:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45303	02/03/23 14:28	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	44760	01/25/23 15:51	KS	EET MID
Soluble	Analysis	300.0		1			44877	01/27/23 19:11	CH	EET MID

Client Sample ID: PH08

Lab Sample ID: 890-3913-2
Matrix: Solid
Date Collected: 01/19/23 14:30
Date Received: 01/20/23 09:06

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	45149	01/31/23 14:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45131	02/01/23 11:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45200	02/01/23 12:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			45429	02/03/23 17:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45214	02/01/23 15:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45303	02/03/23 14:48	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	44760	01/25/23 15:51	KS	EET MID
Soluble	Analysis	300.0		1			44877	01/27/23 19:16	CH	EET MID

Client Sample ID: PH08

Lab Sample ID: 890-3913-3
Matrix: Solid
Date Collected: 01/19/23 14:35
Date Received: 01/20/23 09:06

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	45149	01/31/23 14:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45131	02/01/23 11:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45200	02/01/23 12:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			45429	02/03/23 17:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45214	02/01/23 15:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45303	02/03/23 15:09	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44760	01/25/23 15:51	KS	EET MID
Soluble	Analysis	300.0		1			44877	01/27/23 19:30	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: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

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

Method Summary

Client: Ensolum
Project/Site: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

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: Harrier 35 Federal Com 001H

Job ID: 890-3913-1
SDG: 03D2024093

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3913-1	PH08	Solid	01/19/23 14:25	01/20/23 09:06	1'
890-3913-2	PH08	Solid	01/19/23 14:30	01/20/23 09:06	3'
890-3913-3	PH08	Solid	01/19/23 14:35	01/20/23 09:06	6'

eurofins | 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 1 of 1

Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817.683.2503	Email:	kjennings@ensolum.com

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:	Harrier 35 Federal Com 001H	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024093	Due Date:	
Project Location:	Lea County, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.2
Total Containers:		Corrected Temperature:	4.0

ANALYSIS REQUEST

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2S0_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

890-3913 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (8015)	Chlorides	BTEX (8021)	Sample Comments
PH08	S	1.19.23	1425	1'	G	1		x	x	x	
PH08	S	1.19.23	1430	3'	G	1		x	x	x	
PH08	S	1.19.23	1435	6'	G	1		x	x	x	

Incident Number
NAPP2225531487

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Amanda Short	1-20-23 900	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-1107 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3913-1
Address: 1211 W Florida Ave ,	Due Date Requested: 1/26/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701	PO #:			
Phone: 432-704-5440(Tel)	WO #:			
Email:	Project #: 89000094			
Project Name: Harrier 35 Federal Com 001H	SSOW#:			
Site:				

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Y	Trizma
		Z	other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note
Preservation Code:													
PH08 (890-3913-1)	1/19/23	14 25 Mountain		Solid			X	X	X	X	X	1	
PH08 (890-3913-2)	1/19/23	14 30 Mountain		Solid			X	X	X	X	X	1	
PH08 (890-3913-3)	1/19/23	14 35 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

	Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
	Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
	Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3913-1
SDG Number: 03D2024093

Login Number: 3913
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3913-1
SDG Number: 03D2024093

Login Number: 3913
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 01/23/23 07:42 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").	N/A	

ENSOLUM

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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ 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 _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 09/12/2022

L48 Spill Volume Estimate Form

Incident Number:	Harrier 35
Asset Area:	Delaware east
Release Discovery Date & Time:	9/4/22 7am
Release Type:	Produced Water
Provide any known details about the event:	

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	20.0	10.0	0.50	3	200.000	0.014	0.494	0.001	0.495
Rectangle B	30.0	10.0	0.50	2	300.000	0.021	1.113	0.001	1.114
Rectangle C	270.0	8.0	0.50	3	2160.000	0.014	5.340	0.001	5.344
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
								Total Volume Release:	6.952

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 142261

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 142261
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	9/12/2022

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2225531487
District RP	
Facility ID	fAPP2203945184
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ 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.

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State of New Mexico
Oil Conservation Division

Incident ID	NAPP2225531487
District RP	
Facility ID	fAPP2203945184
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: _____6/1/2023_____

email: __Jacob.Laird@conocophillips.com_____ Telephone: ___575-703-5482_____

OCD Only

Received by: _____ Date: _____

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2225531487
District RP	
Facility ID	fAPP2203945184
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: __Jacob Laird_____ Title: __Environmental Engineer_____

Signature: Jacob Laird Date: ____6/1/2023_____

email: __Jacob.Laird@conocophillips.com_____ Telephone: __575-703-5482_____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval see text box below - NV ☐ Denied ☐ Deferral Approved

Signature: Nelson Velez Date: 08/22/2023

Conditions of approval are as follows;

1. Exploratory groundwater soil boring should be in relatively close proximity to the point of release.
2. Remediation Due date has been set to November 20, 2023 (90-days) for the appropriate reporting documentation or the final closure report.

ENSOLUM

APPENDIX F

NMOCD Notifications

From: OCDOnline@state.nm.us
To: Kalei Jennings
Subject: The Oil Conservation Division (OCD) has approved the application, Application ID: 163605
Date: Thursday, January 5, 2023 3:27:48 PM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Kalei Jennings for COG OPERATING LLC),

The OCD has approved the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2225531487, with the following conditions:

- **Work Plan Approved with Conditions. The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater. Lateral samples should be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release.**

The signed C-141 can be found in the OCD Online: Imaging under the incident ID (n#).

If you have any questions regarding this application, please contact me.

Thank you,
Jennifer Nobui
Environmental Specialist-Advanced
505-470-3407
Jennifer.Nobui@emnrd.nm.gov

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 222614
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Conditions of approval are as follows; 1. Exploratory groundwater soil boring should be in relatively close proximity to the point of release. 2. Remediation Due date has been set to November 20, 2023 (90-days) for the appropriate reporting documentation or the final closure report.	8/22/2023