ENSOLUM

May 24, 2023

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

Re: Closure Request
Bandit 15 Federal Com 002
Incident Number NAPP2307544597
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities performed at the Bandit 15 Federal Com 002 (Site). The purpose of the assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of produced water and crude oil into an unlined earthen storage tank containment. Based on the excavation activities and laboratory analytical results from the soil sampling events, COG is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2307544597.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit J, Section 15, Township 20 South, Range 33 East, in Lea County, New Mexico (32.5710°, -103.6489°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On March 2, 2023, a corrosion hole in a storage tank resulted in the release of approximately 18.7 barrels (bbls) of produced water and 0.19 bbls of crude oil into the unlined earthen secondary containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 16.83 bbls of produced water and 0.17 bbls of crude oil were recovered. COG reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on March 16, 2023. The release was assigned Incident Number NAPP2307544597.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a recent boring drilled for determination of regional goundwater depth. On April 12, 2023, a borehole (BH01) was advanced to a depth of 108 feet bgs via hollow stem auger drill rig. The borehole was located approximately 257 feet northwest of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Appendix A. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 100 feet bgs. The borehole was properly abandoned using drill cuttings and hydrated bentonite chips. All wells used for depth to groundwater determination are depicted on Figure 1 and the referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a freshwater emergent wetland, located approximately 2.5 miles west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and less than 300 feet from an occupied residence, school, hospital, institution, or church. The site is greater than 300 feet from a wetland. The Site is greater than 1,000 feet from a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On April 3, 2023, Ensolum personnel completed a Site visit to evaluate the release extent based on information provided on the Form C-141 and visual observations. Nine assessment soil samples (SS01 through SS09) were collected within and around the release extent at a depth of approximately 0.5 feet bgs. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

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

Laboratory analytical results for soil samples SS06 through SS09, collected around the release extent, indicated all COC concentrations were compliant with the Site Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for soil sample SS03, collected within the release extent, indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for soil samples SS01, SS02, SS04, and SS05, collected within the release extent, indicated TPH and/or chloride concentrations exceeded the Site Closure Criteria. Based on laboratory analytical results for the soil samples, excavation of impacted soil was warranted.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between April 24, 2023, and May 3, 2023, Ensolum personnel were at the Site to oversee excavation activities. Impacted soil was excavated from the release area as indicated by field screening activities and laboratory analytical results for soil samples SS01, SS02, SS04, and SS05. Excavation activities were performed via back-hoe, hydrovac, hand shoveling, and transport vehicles. To direct excavation activities, soil was field screened for VOCs and chloride as described above. The excavation was completed to depths ranging from 1-foot bgs to 1.25 feet bgs. Photographic documentation is included in Appendix B.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor of the excavation extent. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Due to the shallow depth of the excavation, the sidewalls were incorporated into the floor samples. Composite soil samples FS01 through FS07 were collected from the floor of the excavation at a depth of 1-foot bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above.

Laboratory analytical results for excavation soil samples FS01, FS02, and FS04 through FS07, indicated all COC concentrations were compliant with the Site Closure Criteria and met the most stringent Table I Closure Criteria. Laboratory analytical results for excavation soil sample FS03 indicated all COC concentrations were compliant with the Site Closure Criteria but exceeded the most stringent Table I Closure Criteria. Additional soil was removed in the vicinity of floor sample FS03 and subsequent floor sample FS03A, collected at a depth of 1.25 feet bgs, met the most stringent Table I Closure Criteria. The excavation extent and excavation soil sample locations are presented on Figure 3.

The excavation measured approximately 1,288 square feet in aerial extent. A total of approximately 60 cubic yards of impacted soil was removed during the excavation activities. The soil was transported and properly disposed of at the R360 Disposal Facility in Hobbs, New Mexico. The excavation was secured with fencing once the excavation was complete.

CLOSURE REQUEST

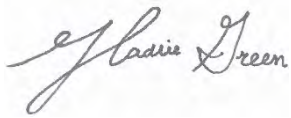
Site assessment and excavation activities were conducted at the Site to address the March 2, 2023, produced water and crude oil release. Laboratory analytical results for the excavation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria and met the most stringent Table I Closure Criteria. Based on the soil sample analytical results, no further remediation was required.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 100 feet bgs and no other sensitive receptors were identified near

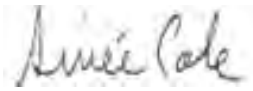
the release extent. COG believes these remedial actions are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number NAPP2307544597. The Final C-141 is included in Appendix E.

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

Sincerely,
Ensolum, LLC



Hadlie Green
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	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	NMOCD Notifications
Appendix E	Final C-141

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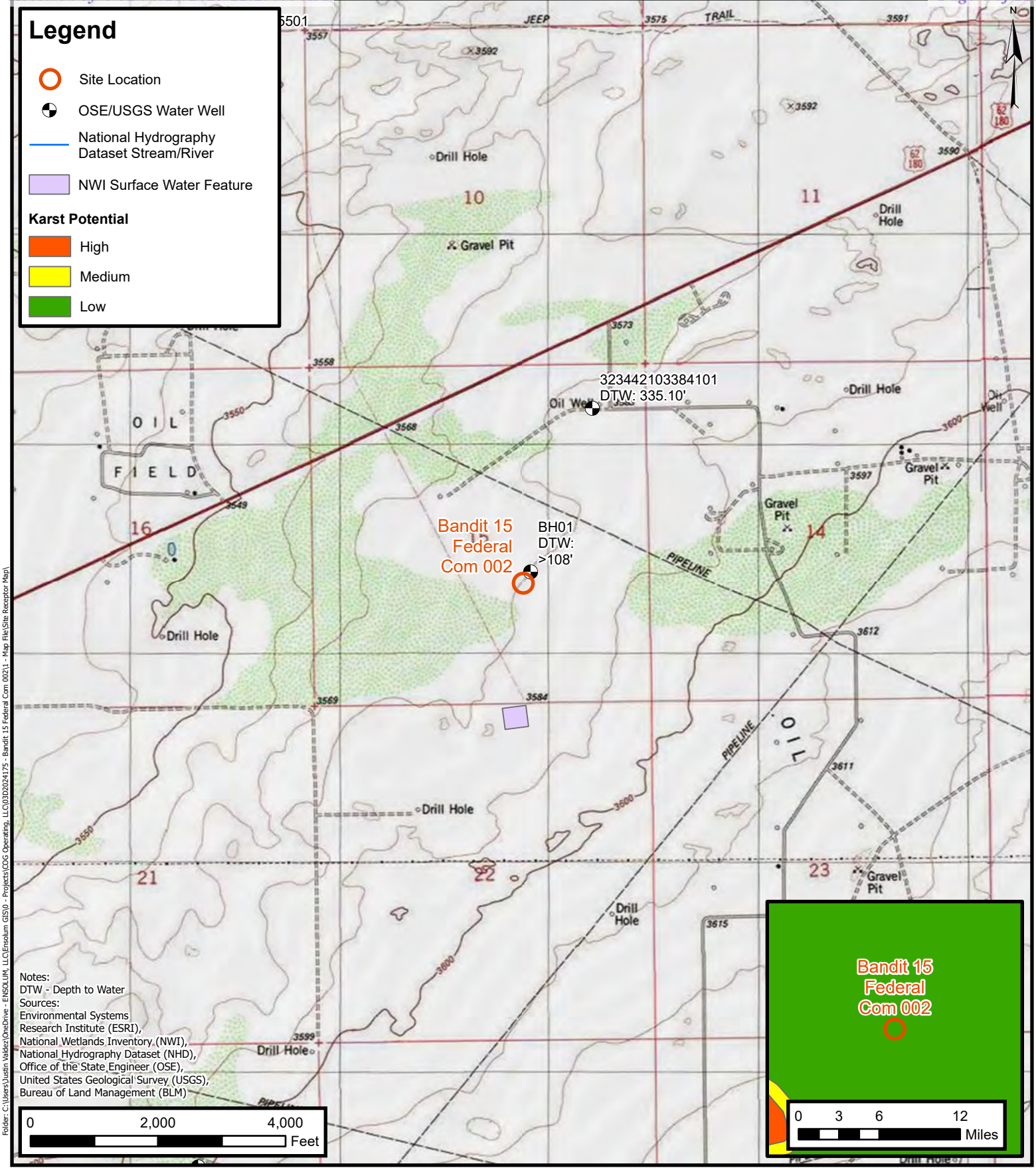
FIGURES



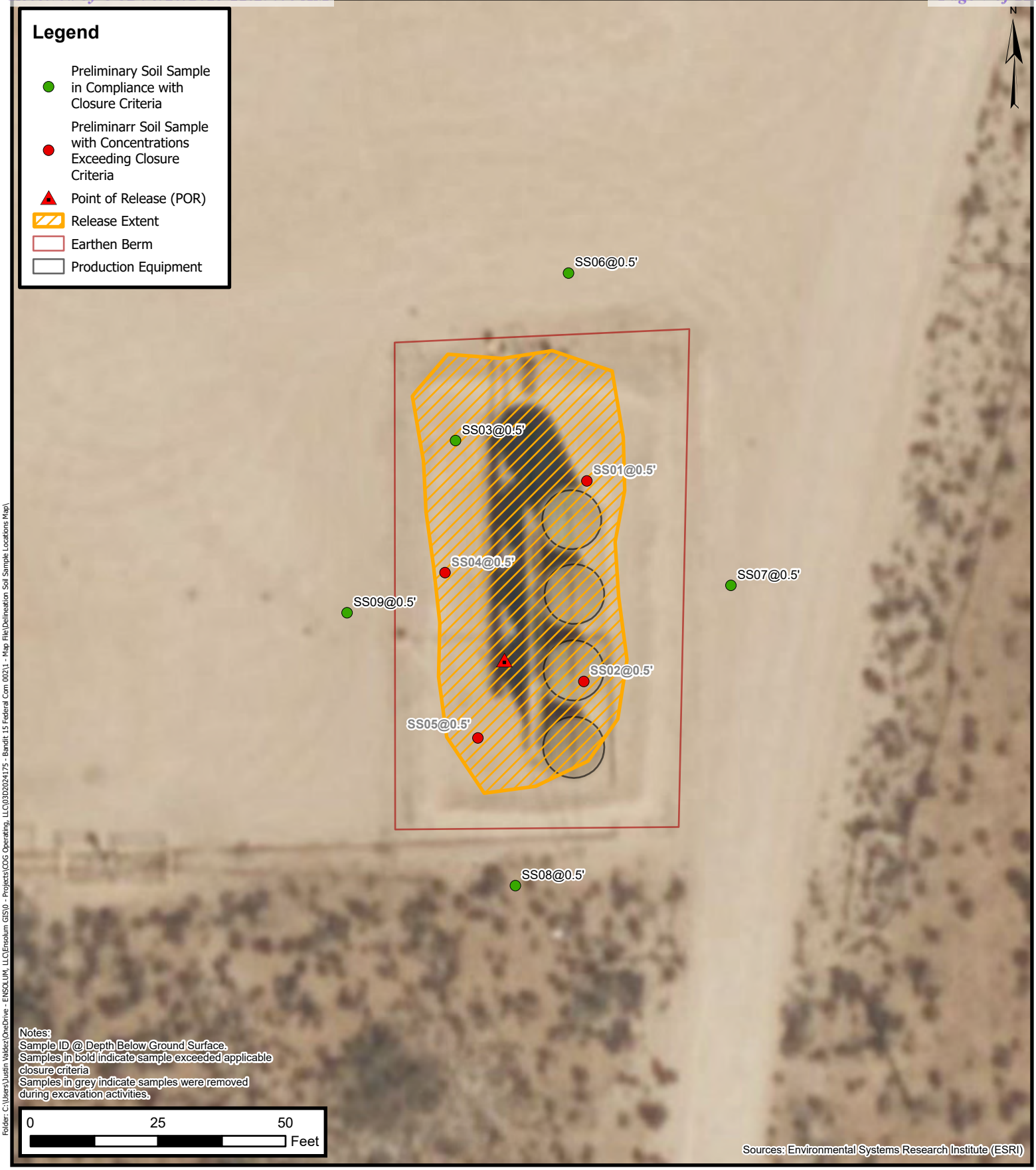
Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024175 - Bandit 15 Federal Com 002\1 - Map File\Site Receptor Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

COG Operating, LLC
Bandit 15 Federal Com 002
Incident Number: NAPP2307544597
Unit J, Sec 15, T20S, R33E
Lea County, New Mexico

FIGURE 1



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024175 - Bandit 15 Federal Com 002\1 - Map File\Delineation Soil Sample Locations Map\

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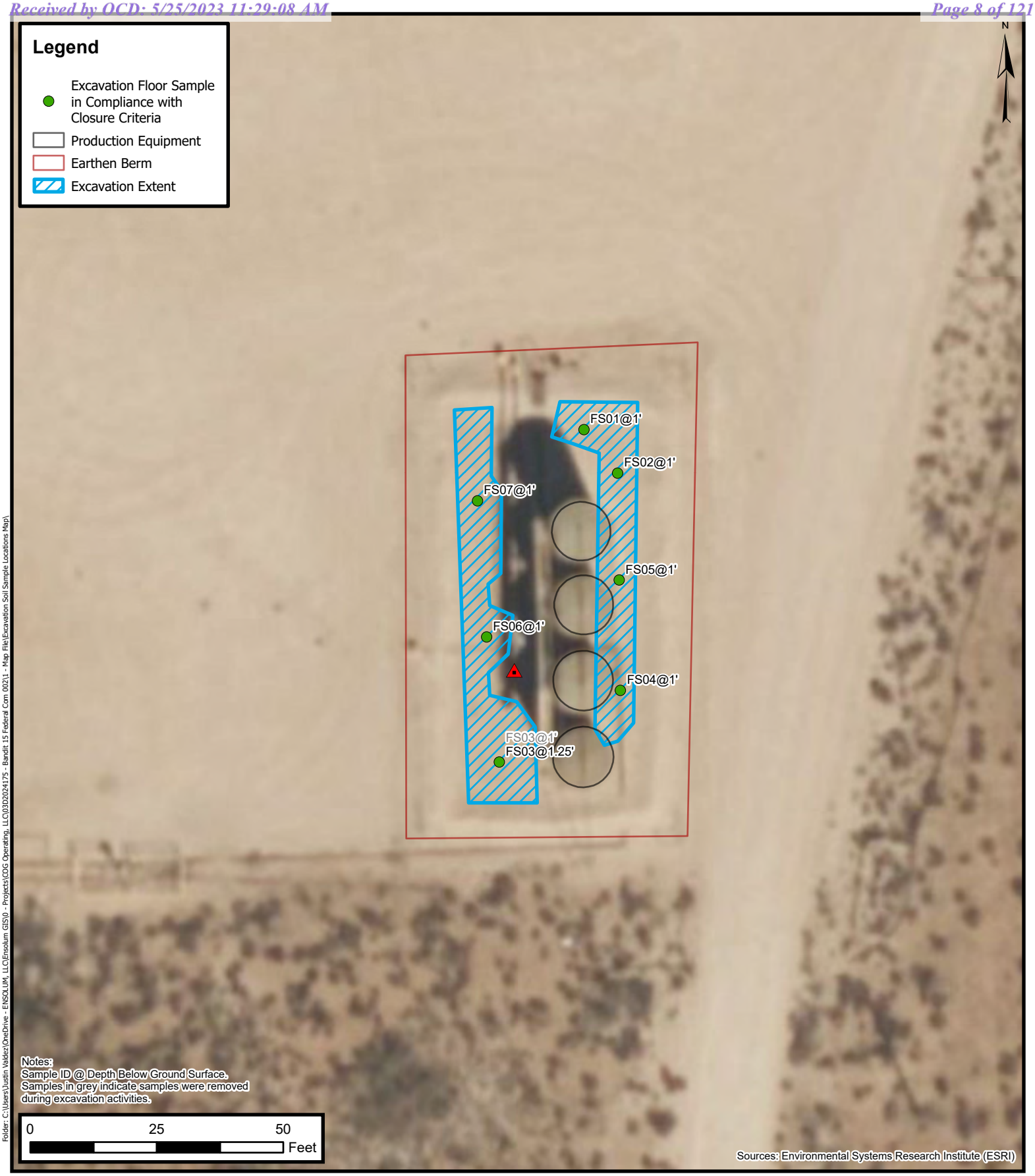
Preliminary Soil Sample Locations

COG Operating, LLC
Bandit 15 Federal Com 002
Incident Number: NAPP2307544597
Unit J, Sec 15, T20S, R33E
Lea County, New Mexico

FIGURE 2



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024175 - Bandit 15 Federal Com 002\1 - Map File\Excavation Soil Sample Locations Map\

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Excavation Soil Sample Locations

COG Operating, LLC
Bandit 15 Federal Com 002
Incident Number: NAPP2307544597
Unit J, Sec 15, T20S, R33E
Lea County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Bandit 15 Federal Com 002
COG Operating, LLC
Lea County, New Mexico

Sample Designation	Date	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 Assessment Soil Samples										
SS01	04/03/2023	0.5	0.00223	0.00485	<249	10,400	1,270	**10,400**	**11,700**	11,000
SS02	04/03/2023	0.5	<0.00200	<0.00399	<49.9	514	80.5	514	595	**23,100**
SS03	04/03/2023	0.5	<0.00200	<0.00401	<49.8	57.6	<49.8	57.6	57.6	19,800
SS04	04/03/2023	0.5	<0.00199	<0.00398	<49.9	2,070	516	**2,070**	**2,590**	**29,700**
SS05	04/03/2023	0.5	<0.00199	<0.00398	<249	16,100	2,360	**16,100**	**18,500**	13,400
SS06	04/03/2023	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	255
SS07	04/03/2023	0.5	<0.00201	<0.00402	<49.8	<49.8	98.7	<49.8	98.7	65.3
SS08	04/03/2023	0.5	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	131
SS09	04/03/2023	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	115
Excavation Soil Samples										
FS01	04/24/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	419
FS02	04/24/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	174
FS03	04/24/2023	1	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	705
FS03A	05/03/2023	1.25	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	278
FS04	04/24/2023	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	455
FS05	04/24/2023	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	214
FS06	04/24/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	81.8
FS07	04/24/2023	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	217

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

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

Grey *text represents samples that have been excavated*

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APPENDIX A

Referenced Well Records

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Sample Name: BH01	Date: 4/12/2023	
Site Name: Bandit 15 Federal Com 002H		
Incident Number:		
Job Number: 03D2024108		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Air Rotary
Coordinates: 32.340567,-103.639398	Hole Diameter:	Total Depth: 108'
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	-	-	N	-	-	0	SP-SM	Sand (surface sample): dark tan, brown, fine grain, poorly graded, few gravel, no stain, no odor
Dry	-	-	N	-	-	10	CHHE	Caliche: off white, light tan, pinkish tan, no stain, no odor
Dry	-	-	N	-	-	20	CHHE	SAA (Same as above)
Dmp	-	-	N	-	-	30	SP-SM	Sand: light tan, tan, fine grain, poorly graded, few gravel, slightly damp, no stain, no odor
Dry	-	-	N	-	-	40	SP-SM	Sand/Silt (Red Beds): brownish red, very fine - clay grain, poorly graded, low plasticity, cohesive, no stain, no odor
Dry	-	-	N	-	-	50	SP-SM	Sand/Silt: reddish brown, gray banding, very fine-silt grain, slightly cohesive, no stain no odor
Dry	-	-	N	-	-	60	SP-SM	SAA
Dry	-	-	N	-	-	70	SP-SM	SAA
Dry	-	-	N	-	-	80	SP-SM	SAA
Dry	-	-	N	-	-	90	SP-SM	Sand/Silt: reddish tan, gray, rusty red, very fine grain, poorly graded, non cohesive, no stain, no odor
Dry	-	-	N	-	-	100	SP-SM	SAA
						110		TD at 108' below ground surface
						120		

OSE DIT JUL 22 2021 PM2:05

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD2 CP-1865		CP-01865

WELL OWNER NAME(S)	PHONE (OPTIONAL)
BTA OIL PRODUCERS, LLC	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
104 S PECOS ST	MIDLAND	TX	79701

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	35	59	N
	LONGITUDE	-103	38	30.4	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

LEA SECTION 2 TOWNSHIP 20S RANGE 33E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1753	JACOB FRIESSEN	VANGURD

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
2-8-21	2-8-21	105	105	0

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): 0

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
-1	99	4.5	BLANK PVC	THREAD 2.375	2	.187	
99	105	4.5	SCREEN PVC	THREAD 2.375	2	.187	.02

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	99	4.5	GROUT	8	POURED
99	105	4.5	SILICA SAND	.5	POURED

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 04/30/19)

FILE NO. C-1865	POD NO. 2	TRN NO. 686917
LOCATION 20S-33E-02 3.1.B	WELL TAG ID NO. NA	PAGE 1 OF 2

OSE DIT JUL 22 2021 PM2:05

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	2	2	TOPSOIL	Y ✔ N	
2	21	19	CALICHE	Y ✔ N	
21	48	27	SAND	Y ✔ N	
48	66	18	RED CLAY	Y ✔ N	
66	77	11	SAND	Y ✔ N	
77	89	12	RED CLAY	Y ✔ N	
89	105	16	BLUE CLAY	Y ✔ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☑ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

PETE LOEWEN

6. SIGNATURE

BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.

JACOB FRIESSEN — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

7-13-21 — DATE

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/2019)

FILE NO. C-1865	POD NO. 2	TRN NO. 686912	
LOCATION 20S.33E.02 3-1-3		WELL TAG ID NO. NA	PAGE 2 OF 2

National Water Information System: Web Interface

USGS Water Resources

Data Category: Site Information | Geographic Area: United States | GO

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- Effective October 24, 2022 hyperlinks to legacy Current Condition pages will automatically redirect users to the corresponding Monitoring Location page. Please see the Water Data For The Nation Blog for full details, including how to navigate back to the legacy Current Condition page, if desired.
- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

USGS 323442103384101 20S.33E.15.22143

Available data for this site: SUMMARY OF ALL AVAILABLE DATA | GO

Well Site

DESCRIPTION:

Latitude 32°34'42", Longitude 103°38'41" NAD27
Lea County, New Mexico , Hydrologic Unit 13060011
Well depth: not determined.
Land surface altitude: 3,583 feet above NAVD88.
Well completed in "Other aquifers" (N9999OTHER) national aquifer.
Well completed in "Santa Rosa Sandstone" (231SNRS) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1955-04-20	1955-04-20	1

Revisions	Unavailable (site:0) (timeseries:0)

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

---

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=323442103384101

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2022-11-07 13:57:20 EST
0.28 0.27 caww01

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

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- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 323442103384101

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 323442103384101 20S.33E.15.22143

Lea County, New Mexico
Latitude 32°34'42", Longitude 103°38'41" NAD27
Land-surface elevation 3,583 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Santa Rosa Sandstone (231SNRS) 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
1955-04-20		D	62610		3246.35	NGVD29	1	Z			A
1955-04-20		D	62611		3247.90	NAVD88	1	Z			A
1955-04-20		D	72019	335.10			1	Z			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
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Data Tips
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News

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
COG Operating, LLC
Bandit 15 Federal Com 002
Incident Number NAPP2307544597

Photograph: 1 Date: 3/2/2023
Description: Initial release extent
View: Southeast

Photograph: 2 Date: 4/3/2023
Description: Initial assessment activities
View: Northwest

Photograph: 3 Date: 4/25/2023
Description: Excavation activities
View: South

Photograph: 4 Date: 4/25/2023
Description: Excavation activities
View: South

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/18/2023 10:25:06 AM Revision 1

JOB DESCRIPTION

Bandit 15 Federal Com #2
SDG NUMBER 03D2024175

JOB NUMBER

890-4462-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

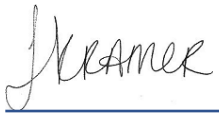
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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
4/18/2023 10:25:06 AM
Revision 1

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

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Laboratory Job ID: 890-4462-1
SDG: 03D2024175

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Job ID: 890-4462-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4462-1

REVISION

The report being provided is a revision of the original report sent on 4/11/2023. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Receipt
The samples were received on 4/3/2023 4:09 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4462-1), SS02 (890-4462-2), SS03 (890-4462-3), SS04 (890-4462-4), SS05 (890-4462-5), SS06 (890-4462-6), SS07 (890-4462-7), SS08 (890-4462-8) and SS09 (890-4462-9).

GC VOA
Method 8021B: The laboratory control sample (LCS) for preparation batch 880-50805 and analytical batch 880-50769 recovered outside control limits for the following analytes: o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-4436-A-1-K). 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: SS06 (890-4462-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS01 (890-4462-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-50535 and analytical batch 880-50654 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS05 (890-4462-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Client Sample ID: SS01
Date Collected: 04/03/23 09:20
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00223**		0.00199		mg/Kg		04/10/23 10:30	04/11/23 03:38	1
Toluene	**0.00262**		0.00199		mg/Kg		04/10/23 10:30	04/11/23 03:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/10/23 10:30	04/11/23 03:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/10/23 10:30	04/11/23 03:38	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		04/10/23 10:30	04/11/23 03:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/10/23 10:30	04/11/23 03:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*04/10/23 10:30*	*04/11/23 03:38*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*04/10/23 10:30*	*04/11/23 03:38*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00485**		0.00398		mg/Kg			04/11/23 10:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**11700**		249		mg/Kg			04/09/23 22:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<249	U	249		mg/Kg		04/05/23 16:03	04/07/23 18:06	5
Diesel Range Organics (Over C10-C28)	**10400**		249		mg/Kg		04/05/23 16:03	04/07/23 18:06	5
Oil Range Organics (Over C28-C36)	**1270**		249		mg/Kg		04/05/23 16:03	04/07/23 18:06	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*04/05/23 16:03*	*04/07/23 18:06*	*5*
o-Terphenyl	*185*	*S1+*	*70 - 130*	*04/05/23 16:03*	*04/07/23 18:06*	*5*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11000**		100		mg/Kg			04/09/23 16:32	20

Client Sample ID: SS02
Date Collected: 04/03/23 09:25
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-2
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		04/10/23 10:30	04/11/23 03:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/10/23 10:30	04/11/23 03:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/10/23 10:30	04/11/23 03:59	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/10/23 10:30	04/11/23 03:59	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		04/10/23 10:30	04/11/23 03:59	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/10/23 10:30	04/11/23 03:59	1

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Client Sample ID: SS02

Date Collected: 04/03/23 09:25
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-2

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*04/10/23 10:30*	*04/11/23 03:59*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*04/10/23 10:30*	*04/11/23 03:59*	*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			04/11/23 10:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**595**		49.9	mg/Kg			04/09/23 22:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/05/23 16:03	04/07/23 18:27	1
Diesel Range Organics (Over C10-C28)	**514**		49.9	mg/Kg		04/05/23 16:03	04/07/23 18:27	1
Oil Range Organics (Over C28-C36)	**80.5**		49.9	mg/Kg		04/05/23 16:03	04/07/23 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*04/05/23 16:03*	*04/07/23 18:27*	*1*
o-Terphenyl	*99*		*70 - 130*	*04/05/23 16:03*	*04/07/23 18:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23100**		250	mg/Kg			04/09/23 16:37	50

Client Sample ID: SS03

Date Collected: 04/03/23 09:30
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-3

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		04/10/23 10:30	04/11/23 04:19	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/10/23 10:30	04/11/23 04:19	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/10/23 10:30	04/11/23 04:19	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/10/23 10:30	04/11/23 04:19	1
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		04/10/23 10:30	04/11/23 04:19	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/10/23 10:30	04/11/23 04:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*04/10/23 10:30*	*04/11/23 04:19*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*04/10/23 10:30*	*04/11/23 04:19*	*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			04/11/23 10:21	1

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Client Sample ID: SS03
Date Collected: 04/03/23 09:30
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**57.6**		49.8		mg/Kg			04/09/23 22:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		04/05/23 16:03	04/07/23 18:48	1
Diesel Range Organics (Over C10-C28)	**57.6**		49.8		mg/Kg		04/05/23 16:03	04/07/23 18:48	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/05/23 16:03	04/07/23 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*04/05/23 16:03*	*04/07/23 18:48*	*1*
o-Terphenyl	*100*		*70 - 130*	*04/05/23 16:03*	*04/07/23 18:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19800**		249		mg/Kg			04/09/23 16:50	50

Client Sample ID: SS04
Date Collected: 04/03/23 09:35
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-4
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		04/10/23 10:30	04/11/23 04:40	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/10/23 10:30	04/11/23 04:40	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/10/23 10:30	04/11/23 04:40	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/10/23 10:30	04/11/23 04:40	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		04/10/23 10:30	04/11/23 04:40	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/10/23 10:30	04/11/23 04:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*04/10/23 10:30*	*04/11/23 04:40*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*04/10/23 10:30*	*04/11/23 04:40*	*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			04/11/23 10:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**2590**		49.9		mg/Kg			04/09/23 22:49	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		04/06/23 15:38	04/09/23 05:01	1
Diesel Range Organics (Over C10-C28)	**2070**		49.9		mg/Kg		04/06/23 15:38	04/09/23 05:01	1
Oll Range Organics (Over C28-C36)	**516**		49.9		mg/Kg		04/06/23 15:38	04/09/23 05:01	1

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Client Sample ID: SS04

Date Collected: 04/03/23 09:35
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-4

Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	04/06/23 15:38	04/09/23 05:01	1
o-Terphenyl	93		70 - 130	04/06/23 15:38	04/09/23 05:01	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29700**		253	mg/Kg			04/09/23 16:55	50

Client Sample ID: SS05

Date Collected: 04/03/23 09:40
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-5

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		04/10/23 10:30	04/11/23 05:00	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/10/23 10:30	04/11/23 05:00	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/10/23 10:30	04/11/23 05:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/10/23 10:30	04/11/23 05:00	1
o-Xylene	<0.00199	U *+	0.00199	mg/Kg		04/10/23 10:30	04/11/23 05:00	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/10/23 10:30	04/11/23 05:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	04/10/23 10:30	04/11/23 05:00	1
1,4-Difluorobenzene (Surr)	105		70 - 130	04/10/23 10:30	04/11/23 05:00	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			04/11/23 10:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**18500**		249	mg/Kg			04/09/23 22:49	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	<249	U	249	mg/Kg		04/06/23 15:38	04/09/23 04:40	5
Diesel Range Organics (Over C10-C28)	**16100**		249	mg/Kg		04/06/23 15:38	04/09/23 04:40	5
Oil Range Organics (Over C28-C36)	**2360**		249	mg/Kg		04/06/23 15:38	04/09/23 04:40	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	122		70 - 130	04/06/23 15:38	04/09/23 04:40	5
o-Terphenyl	281	S1+	70 - 130	04/06/23 15:38	04/09/23 04:40	5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13400**		100	mg/Kg			04/09/23 16:59	20

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Client Sample ID: SS06

Date Collected: 04/03/23 09:45
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-6
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		04/10/23 10:30	04/11/23 05:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/10/23 10:30	04/11/23 05:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/10/23 10:30	04/11/23 05:21	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/10/23 10:30	04/11/23 05:21	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		04/10/23 10:30	04/11/23 05:21	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/10/23 10:30	04/11/23 05:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*142*	*S1+*	*70 - 130*	*04/10/23 10:30*	*04/11/23 05:21*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*04/10/23 10:30*	*04/11/23 05:21*	*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			04/11/23 10:21	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			04/09/23 22:49	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		04/06/23 15:38	04/08/23 22:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/06/23 15:38	04/08/23 22:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/06/23 15:38	04/08/23 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*04/06/23 15:38*	*04/08/23 22:36*	*1*
o-Terphenyl	*105*		*70 - 130*	*04/06/23 15:38*	*04/08/23 22:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**255**		5.01		mg/Kg			04/09/23 17:04	1

Client Sample ID: SS07

Date Collected: 04/03/23 09:50
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-7
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		04/10/23 10:30	04/11/23 05:41	1
Toluene	<0.00201	U	0.00201		mg/Kg		04/10/23 10:30	04/11/23 05:41	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		04/10/23 10:30	04/11/23 05:41	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		04/10/23 10:30	04/11/23 05:41	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		04/10/23 10:30	04/11/23 05:41	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		04/10/23 10:30	04/11/23 05:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*04/10/23 10:30*	*04/11/23 05:41*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Client Sample ID: SS07
Date Collected: 04/03/23 09:50
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*04/10/23 10:30*	*04/11/23 05:41*	*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			04/11/23 10:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**98.7**		49.8	mg/Kg			04/09/23 22:49	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		04/06/23 15:38	04/08/23 22:57	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		04/06/23 15:38	04/08/23 22:57	1
Oil Range Organics (Over C28-C36)	**98.7**		49.8	mg/Kg		04/06/23 15:38	04/08/23 22:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*04/06/23 15:38*	*04/08/23 22:57*	*1*
o-Terphenyl	*96*		*70 - 130*	*04/06/23 15:38*	*04/08/23 22:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**65.3**		5.00	mg/Kg			04/09/23 17:08	1

Client Sample ID: SS08
Date Collected: 04/03/23 09:55
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-8
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		04/10/23 10:30	04/11/23 06:01	1
Toluene	<0.00202	U	0.00202	mg/Kg		04/10/23 10:30	04/11/23 06:01	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/10/23 10:30	04/11/23 06:01	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		04/10/23 10:30	04/11/23 06:01	1
o-Xylene	<0.00202	U *+	0.00202	mg/Kg		04/10/23 10:30	04/11/23 06:01	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		04/10/23 10:30	04/11/23 06:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*04/10/23 10:30*	*04/11/23 06:01*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*04/10/23 10:30*	*04/11/23 06:01*	*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			04/11/23 10:21	1

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Client Sample ID: SS08

Date Collected: 04/03/23 09:55
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-8
Matrix: Solid

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			04/09/23 22:49	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		04/06/23 15:38	04/08/23 23:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/06/23 15:38	04/08/23 23:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/06/23 15:38	04/08/23 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*04/06/23 15:38*	*04/08/23 23:19*	*1*
o-Terphenyl	*106*		*70 - 130*	*04/06/23 15:38*	*04/08/23 23:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	131		5.00		mg/Kg			04/09/23 17:13	1

Client Sample ID: SS09

Date Collected: 04/03/23 10:00
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-9
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		04/10/23 10:30	04/11/23 06:22	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/10/23 10:30	04/11/23 06:22	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/10/23 10:30	04/11/23 06:22	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		04/10/23 10:30	04/11/23 06:22	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		04/10/23 10:30	04/11/23 06:22	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		04/10/23 10:30	04/11/23 06:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*04/10/23 10:30*	*04/11/23 06:22*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*04/10/23 10:30*	*04/11/23 06:22*	*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			04/11/23 10:21	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			04/09/23 22:49	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		04/17/23 09:25	04/17/23 17:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/17/23 09:25	04/17/23 17:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/17/23 09:25	04/17/23 17:46	1

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Client Sample ID: SS09

Date Collected: 04/03/23 10:00
Date Received: 04/03/23 16:09
Sample Depth: 0.5'

Lab Sample ID: 890-4462-9

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane				*04/17/23 09:25*	*04/17/23 17:46*	*1*
o-Terphenyl				*04/17/23 09:25*	*04/17/23 17:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**115**		4.98		mg/Kg			04/09/23 17:17	1

Surrogate Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

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)
890-4436-A-1-I MS	Matrix Spike	99	115
890-4436-A-1-J MSD	Matrix Spike Duplicate	103	111
890-4462-1	SS01	111	103
890-4462-2	SS02	112	91
890-4462-3	SS03	102	78
890-4462-4	SS04	100	80
890-4462-5	SS05	98	105
890-4462-6	SS06	142 S1+	76
890-4462-7	SS07	83	96
890-4462-8	SS08	88	93
890-4462-9	SS09	97	81
LCS 880-50805/1-A	Lab Control Sample	120	110
LCSD 880-50805/2-A	Lab Control Sample Dup	122	109
MB 880-50536/5-B	Method Blank	80	96
MB 880-50805/5-A	Method Blank	80	76

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)
880-26670-A-61-B MS	Matrix Spike	118	108
880-26670-A-61-C MSD	Matrix Spike Duplicate	115	105
880-26670-A-69-D MS	Matrix Spike	121	109
880-26670-A-69-E MSD	Matrix Spike Duplicate	121	110
890-4462-1	SS01	100	185 S1+
890-4462-2	SS02	95	99
890-4462-3	SS03	92	100
890-4462-4	SS04	108	93
890-4462-5	SS05	122	281 S1+
890-4462-6	SS06	107	105
890-4462-7	SS07	95	96
890-4462-8	SS08	108	106
890-4513-A-1-B MS	Matrix Spike	84	75
890-4513-A-1-C MSD	Matrix Spike Duplicate	76	70
LCS 880-50425/2-A	Lab Control Sample	104	109
LCS 880-50535/2-A	Lab Control Sample	113	118
LCS 880-51297/2-A	Lab Control Sample	98	97
LCSD 880-50425/3-A	Lab Control Sample Dup	89	94
LCSD 880-50535/3-A	Lab Control Sample Dup	100	104
LCSD 880-51297/3-A	Lab Control Sample Dup	86	87
MB 880-50425/1-A	Method Blank	101	113
MB 880-50535/1-A	Method Blank	132 S1+	144 S1+
MB 880-51297/1-A	Method Blank	108	120

Surrogate Legend

Surrogate Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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		
890-4462-9	SS09		

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-50536/5-B
Matrix: Solid
Analysis Batch: 50769

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50536

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/10/23 09:30	04/10/23 11:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/10/23 09:30	04/10/23 11:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/10/23 09:30	04/10/23 11:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/10/23 09:30	04/10/23 11:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/10/23 09:30	04/10/23 11:54	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/10/23 09:30	04/10/23 11:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*04/10/23 09:30*	*04/10/23 11:54*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*04/10/23 09:30*	*04/10/23 11:54*	*1*

Lab Sample ID: MB 880-50805/5-A
Matrix: Solid
Analysis Batch: 50769

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50805

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/10/23 10:30	04/10/23 22:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/10/23 10:30	04/10/23 22:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/10/23 10:30	04/10/23 22:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/10/23 10:30	04/10/23 22:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/10/23 10:30	04/10/23 22:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/10/23 10:30	04/10/23 22:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*04/10/23 10:30*	*04/10/23 22:29*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*04/10/23 10:30*	*04/10/23 22:29*	*1*

Lab Sample ID: LCS 880-50805/1-A
Matrix: Solid
Analysis Batch: 50769

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50805

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1165		mg/Kg		117	70 - 130		
Toluene			0.100	0.1127		mg/Kg		113	70 - 130		
Ethylbenzene			0.100	0.1194		mg/Kg		119	70 - 130		
m-Xylene & p-Xylene			0.200	0.2585		mg/Kg		129	70 - 130		
o-Xylene			0.100	0.1315	*+	mg/Kg		131	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: LCSD 880-50805/2-A
Matrix: Solid
Analysis Batch: 50769

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 50805

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1147		mg/Kg		115	70 - 130	2	35

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

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

Lab Sample ID: LCSD 880-50805/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 50769 — **Prep Batch: 50805**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1081		mg/Kg		108	70 - 130	4	35
Ethylbenzene			0.100	0.1150		mg/Kg		115	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.2470		mg/Kg		123	70 - 130	5	35
o-Xylene			0.100	0.1252		mg/Kg		125	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-4436-A-1-I MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 50769 — **Prep Batch: 50805**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0992	0.08995		mg/Kg		91	70 - 130
Toluene	<0.00200	U	0.0992	0.08088		mg/Kg		81	70 - 130
Ethylbenzene	<0.00200	U	0.0992	0.07497		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.198	0.1467		mg/Kg		73	70 - 130
o-Xylene	<0.00200	U *+	0.0992	0.07380		mg/Kg		74	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: 890-4436-A-1-J MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 50769 — **Prep Batch: 50805**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.09116		mg/Kg		92	70 - 130	1	35
Toluene	<0.00200	U	0.0990	0.08525		mg/Kg		86	70 - 130	5	35
Ethylbenzene	<0.00200	U	0.0990	0.07591		mg/Kg		77	70 - 130	1	35
m-Xylene & p-Xylene	<0.00399	U	0.198	0.1511		mg/Kg		76	70 - 130	3	35
o-Xylene	<0.00200	U *+	0.0990	0.07570		mg/Kg		76	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

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

Lab Sample ID: MB 880-50425/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 50572 — **Prep Batch: 50425**

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		04/05/23 16:03	04/07/23 08:12	1

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

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

Lab Sample ID: MB 880-50425/1-A
Matrix: Solid
Analysis Batch: 50572

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50425

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		04/05/23 16:03	04/07/23 08:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/05/23 16:03	04/07/23 08:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*04/05/23 16:03*	*04/07/23 08:12*	*1*
o-Terphenyl	*113*		*70 - 130*	*04/05/23 16:03*	*04/07/23 08:12*	*1*

Lab Sample ID: LCS 880-50425/2-A
Matrix: Solid
Analysis Batch: 50572

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50425

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1132		mg/Kg		113	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	844.1		mg/Kg		84	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: LCSD 880-50425/3-A
Matrix: Solid
Analysis Batch: 50572

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 50425

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	970.1		mg/Kg		97	70 - 130	15	20
Diesel Range Organics (Over C10-C28)			1000	765.4		mg/Kg		77	70 - 130	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

Lab Sample ID: 880-26670-A-61-B MS
Matrix: Solid
Analysis Batch: 50572

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 50425

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1027		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1176		mg/Kg		116	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*118*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

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

Lab Sample ID: 880-26670-A-61-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 50572 — **Prep Batch: 50425**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1015		mg/Kg		98	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1136		mg/Kg		112	70 - 130	3	20

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

Lab Sample ID: MB 880-50535/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 50654 — **Prep Batch: 50535**

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		04/06/23 15:38	04/08/23 20:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/06/23 15:38	04/08/23 20:26	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/06/23 15:38	04/08/23 20:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*132*	*S1+*	*70 - 130*	*04/06/23 15:38*	*04/08/23 20:26*	*1*
o-Terphenyl	*144*	*S1+*	*70 - 130*	*04/06/23 15:38*	*04/08/23 20:26*	*1*

Lab Sample ID: LCS 880-50535/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 50654 — **Prep Batch: 50535**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1127		mg/Kg		113	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	963.9		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*113*		*70 - 130*
o-Terphenyl	*118*		*70 - 130*

Lab Sample ID: LCSD 880-50535/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 50654 — **Prep Batch: 50535**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1091		mg/Kg		109	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	894.8		mg/Kg		89	70 - 130	7	20

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

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

Lab Sample ID: LCSD 880-50535/3-A
Matrix: Solid
Analysis Batch: 50654

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 50535

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

Lab Sample ID: 880-26670-A-69-D MS
Matrix: Solid
Analysis Batch: 50654

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 50535

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	1108		mg/Kg		108	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	1133		mg/Kg		110	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: 880-26670-A-69-E MSD
Matrix: Solid
Analysis Batch: 50654

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 50535

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1015		mg/Kg		98	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1127		mg/Kg		110	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: MB 880-51297/1-A
Matrix: Solid
Analysis Batch: 51269

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 51297

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		04/17/23 09:25	04/17/23 10:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/17/23 09:25	04/17/23 10:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/17/23 09:25	04/17/23 10:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	04/17/23 09:25	04/17/23 10:10	1
o-Terphenyl	120		70 - 130	04/17/23 09:25	04/17/23 10:10	1

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

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

Lab Sample ID: LCS 880-51297/2-A
Matrix: Solid
Analysis Batch: 51269

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51297

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1066		mg/Kg		107	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1176		mg/Kg		118	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Lab Sample ID: LCSD 880-51297/3-A
Matrix: Solid
Analysis Batch: 51269

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 51297

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1020		mg/Kg		102	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1023		mg/Kg		102	70 - 130	14	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*86*		*70 - 130*
o-Terphenyl	*87*		*70 - 130*

Lab Sample ID: 890-4513-A-1-B MS
Matrix: Solid
Analysis Batch: 51269

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 51297

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	998.5		mg/Kg		98	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1165		mg/Kg		113	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

Lab Sample ID: 890-4513-A-1-C MSD
Matrix: Solid
Analysis Batch: 51269

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 51297

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	1010		mg/Kg		100	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1077		mg/Kg		105	70 - 130	8	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*76*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

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

Lab Sample ID: 890-4513-A-1-C MSD
Matrix: Solid
Analysis Batch: 51269

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 51297

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*70*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-50506/1-A
Matrix: Solid
Analysis Batch: 50741

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			04/09/23 15:01	1

Lab Sample ID: LCS 880-50506/2-A
Matrix: Solid
Analysis Batch: 50741

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	240.8		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-50506/3-A
Matrix: Solid
Analysis Batch: 50741

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	237.0		mg/Kg		95	90 - 110	2	20

Lab Sample ID: 890-4459-A-4-C MS
Matrix: Solid
Analysis Batch: 50741

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	305		252	538.1		mg/Kg		93	90 - 110		

Lab Sample ID: 890-4459-A-4-D MSD
Matrix: Solid
Analysis Batch: 50741

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	305		252	536.0		mg/Kg		92	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

GC VOA

Prep Batch: 50536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-50536/5-B	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 50769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-1	SS01	Total/NA	Solid	8021B	50805
890-4462-2	SS02	Total/NA	Solid	8021B	50805
890-4462-3	SS03	Total/NA	Solid	8021B	50805
890-4462-4	SS04	Total/NA	Solid	8021B	50805
890-4462-5	SS05	Total/NA	Solid	8021B	50805
890-4462-6	SS06	Total/NA	Solid	8021B	50805
890-4462-7	SS07	Total/NA	Solid	8021B	50805
890-4462-8	SS08	Total/NA	Solid	8021B	50805
890-4462-9	SS09	Total/NA	Solid	8021B	50805
MB 880-50536/5-B	Method Blank	Total/NA	Solid	8021B	50536
MB 880-50805/5-A	Method Blank	Total/NA	Solid	8021B	50805
LCS 880-50805/1-A	Lab Control Sample	Total/NA	Solid	8021B	50805
LCSD 880-50805/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	50805
890-4436-A-1-I MS	Matrix Spike	Total/NA	Solid	8021B	50805
890-4436-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	50805

Prep Batch: 50805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-1	SS01	Total/NA	Solid	5035	
890-4462-2	SS02	Total/NA	Solid	5035	
890-4462-3	SS03	Total/NA	Solid	5035	
890-4462-4	SS04	Total/NA	Solid	5035	
890-4462-5	SS05	Total/NA	Solid	5035	
890-4462-6	SS06	Total/NA	Solid	5035	
890-4462-7	SS07	Total/NA	Solid	5035	
890-4462-8	SS08	Total/NA	Solid	5035	
890-4462-9	SS09	Total/NA	Solid	5035	
MB 880-50805/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-50805/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-50805/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4436-A-1-I MS	Matrix Spike	Total/NA	Solid	5035	
890-4436-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 50894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-1	SS01	Total/NA	Solid	Total BTEX	
890-4462-2	SS02	Total/NA	Solid	Total BTEX	
890-4462-3	SS03	Total/NA	Solid	Total BTEX	
890-4462-4	SS04	Total/NA	Solid	Total BTEX	
890-4462-5	SS05	Total/NA	Solid	Total BTEX	
890-4462-6	SS06	Total/NA	Solid	Total BTEX	
890-4462-7	SS07	Total/NA	Solid	Total BTEX	
890-4462-8	SS08	Total/NA	Solid	Total BTEX	
890-4462-9	SS09	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

GC Semi VOA

Prep Batch: 50425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-1	SS01	Total/NA	Solid	8015NM Prep	
890-4462-2	SS02	Total/NA	Solid	8015NM Prep	
890-4462-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-50425/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-50425/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-50425/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-26670-A-61-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-26670-A-61-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 50535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-4	SS04	Total/NA	Solid	8015NM Prep	
890-4462-5	SS05	Total/NA	Solid	8015NM Prep	
890-4462-6	SS06	Total/NA	Solid	8015NM Prep	
890-4462-7	SS07	Total/NA	Solid	8015NM Prep	
890-4462-8	SS08	Total/NA	Solid	8015NM Prep	
MB 880-50535/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-50535/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-50535/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-26670-A-69-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-26670-A-69-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 50572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-1	SS01	Total/NA	Solid	8015B NM	50425
890-4462-2	SS02	Total/NA	Solid	8015B NM	50425
890-4462-3	SS03	Total/NA	Solid	8015B NM	50425
MB 880-50425/1-A	Method Blank	Total/NA	Solid	8015B NM	50425
LCS 880-50425/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	50425
LCSD 880-50425/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	50425
880-26670-A-61-B MS	Matrix Spike	Total/NA	Solid	8015B NM	50425
880-26670-A-61-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	50425

Analysis Batch: 50654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-4	SS04	Total/NA	Solid	8015B NM	50535
890-4462-5	SS05	Total/NA	Solid	8015B NM	50535
890-4462-6	SS06	Total/NA	Solid	8015B NM	50535
890-4462-7	SS07	Total/NA	Solid	8015B NM	50535
890-4462-8	SS08	Total/NA	Solid	8015B NM	50535
MB 880-50535/1-A	Method Blank	Total/NA	Solid	8015B NM	50535
LCS 880-50535/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	50535
LCSD 880-50535/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	50535
880-26670-A-69-D MS	Matrix Spike	Total/NA	Solid	8015B NM	50535
880-26670-A-69-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	50535

Analysis Batch: 50766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-1	SS01	Total/NA	Solid	8015 NM	
890-4462-2	SS02	Total/NA	Solid	8015 NM	
890-4462-3	SS03	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

GC Semi VOA (Continued)

Analysis Batch: 50766 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-4	SS04	Total/NA	Solid	8015 NM	
890-4462-5	SS05	Total/NA	Solid	8015 NM	
890-4462-6	SS06	Total/NA	Solid	8015 NM	
890-4462-7	SS07	Total/NA	Solid	8015 NM	
890-4462-8	SS08	Total/NA	Solid	8015 NM	
890-4462-9	SS09	Total/NA	Solid	8015 NM	

Analysis Batch: 51269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-9	SS09	Total/NA	Solid	8015B NM	51297
MB 880-51297/1-A	Method Blank	Total/NA	Solid	8015B NM	51297
LCS 880-51297/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	51297
LCSD 880-51297/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	51297
890-4513-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	51297
890-4513-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	51297

Prep Batch: 51297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-9	SS09	Total/NA	Solid	8015NM Prep	
MB 880-51297/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-51297/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-51297/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4513-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4513-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 50506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-1	SS01	Soluble	Solid	DI Leach	
890-4462-2	SS02	Soluble	Solid	DI Leach	
890-4462-3	SS03	Soluble	Solid	DI Leach	
890-4462-4	SS04	Soluble	Solid	DI Leach	
890-4462-5	SS05	Soluble	Solid	DI Leach	
890-4462-6	SS06	Soluble	Solid	DI Leach	
890-4462-7	SS07	Soluble	Solid	DI Leach	
890-4462-8	SS08	Soluble	Solid	DI Leach	
890-4462-9	SS09	Soluble	Solid	DI Leach	
MB 880-50506/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-50506/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-50506/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4459-A-4-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4459-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 50741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-1	SS01	Soluble	Solid	300.0	50506
890-4462-2	SS02	Soluble	Solid	300.0	50506
890-4462-3	SS03	Soluble	Solid	300.0	50506
890-4462-4	SS04	Soluble	Solid	300.0	50506
890-4462-5	SS05	Soluble	Solid	300.0	50506

QC Association Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

HPLC/IC (Continued)

Analysis Batch: 50741 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4462-6	SS06	Soluble	Solid	300.0	50506
890-4462-7	SS07	Soluble	Solid	300.0	50506
890-4462-8	SS08	Soluble	Solid	300.0	50506
890-4462-9	SS09	Soluble	Solid	300.0	50506
MB 880-50506/1-A	Method Blank	Soluble	Solid	300.0	50506
LCS 880-50506/2-A	Lab Control Sample	Soluble	Solid	300.0	50506
LCSD 880-50506/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	50506
890-4459-A-4-C MS	Matrix Spike	Soluble	Solid	300.0	50506
890-4459-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	50506

Lab Chronicle

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Client Sample ID: SS01
Date Collected: 04/03/23 09:20
Date Received: 04/03/23 16:09

Lab Sample ID: 890-4462-1
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	50805	04/10/23 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50769	04/11/23 03:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50894	04/11/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			50766	04/09/23 22:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	50425	04/05/23 16:03	AJ	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	50572	04/07/23 18:06	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	50506	04/06/23 10:48	KS	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	50741	04/09/23 16:32	SMC	EET MID

Client Sample ID: SS02
Date Collected: 04/03/23 09:25
Date Received: 04/03/23 16:09

Lab Sample ID: 890-4462-2
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			5.01 g	5 mL	50805	04/10/23 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50769	04/11/23 03:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50894	04/11/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			50766	04/09/23 22:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	50425	04/05/23 16:03	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	50572	04/07/23 18:27	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	50506	04/06/23 10:48	KS	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	50741	04/09/23 16:37	SMC	EET MID

Client Sample ID: SS03
Date Collected: 04/03/23 09:30
Date Received: 04/03/23 16:09

Lab Sample ID: 890-4462-3
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	50805	04/10/23 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50769	04/11/23 04:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50894	04/11/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			50766	04/09/23 22:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	50425	04/05/23 16:03	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	50572	04/07/23 18:48	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	50506	04/06/23 10:48	KS	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	50741	04/09/23 16:50	SMC	EET MID

Client Sample ID: SS04
Date Collected: 04/03/23 09:35
Date Received: 04/03/23 16:09

Lab Sample ID: 890-4462-4
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			5.02 g	5 mL	50805	04/10/23 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50769	04/11/23 04:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50894	04/11/23 10:21	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Client Sample ID: SS04
Date Collected: 04/03/23 09:35
Date Received: 04/03/23 16:09

Lab Sample ID: 890-4462-4
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			50766	04/09/23 22:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	50535	04/06/23 15:38	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	50654	04/09/23 05:01	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	50506	04/06/23 10:48	KS	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	50741	04/09/23 16:55	SMC	EET MID

Client Sample ID: SS05
Date Collected: 04/03/23 09:40
Date Received: 04/03/23 16:09

Lab Sample ID: 890-4462-5
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			5.03 g	5 mL	50805	04/10/23 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50769	04/11/23 05:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50894	04/11/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			50766	04/09/23 22:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	50535	04/06/23 15:38	SM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	50654	04/09/23 04:40	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	50506	04/06/23 10:48	KS	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	50741	04/09/23 16:59	SMC	EET MID

Client Sample ID: SS06
Date Collected: 04/03/23 09:45
Date Received: 04/03/23 16:09

Lab Sample ID: 890-4462-6
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			5.01 g	5 mL	50805	04/10/23 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50769	04/11/23 05:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50894	04/11/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			50766	04/09/23 22:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	50535	04/06/23 15:38	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	50654	04/08/23 22:36	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	50506	04/06/23 10:48	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50741	04/09/23 17:04	SMC	EET MID

Client Sample ID: SS07
Date Collected: 04/03/23 09:50
Date Received: 04/03/23 16:09

Lab Sample ID: 890-4462-7
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			4.97 g	5 mL	50805	04/10/23 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50769	04/11/23 05:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50894	04/11/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			50766	04/09/23 22:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	50535	04/06/23 15:38	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	50654	04/08/23 22:57	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Client Sample ID: SS07
Date Collected: 04/03/23 09:50
Date Received: 04/03/23 16:09

Lab Sample ID: 890-4462-7
Matrix: Solid

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 g	50 mL	50506	04/06/23 10:48	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50741	04/09/23 17:08	SMC	EET MID

Client Sample ID: SS08
Date Collected: 04/03/23 09:55
Date Received: 04/03/23 16:09

Lab Sample ID: 890-4462-8
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	50805	04/10/23 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50769	04/11/23 06:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50894	04/11/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			50766	04/09/23 22:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	50535	04/06/23 15:38	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	50654	04/08/23 23:19	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	50506	04/06/23 10:48	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50741	04/09/23 17:13	SMC	EET MID

Client Sample ID: SS09
Date Collected: 04/03/23 10:00
Date Received: 04/03/23 16:09

Lab Sample ID: 890-4462-9
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	50805	04/10/23 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50769	04/11/23 06:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50894	04/11/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			50766	04/09/23 22:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	51297	04/17/23 09:25	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51269	04/17/23 17:46	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	50506	04/06/23 10:48	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50741	04/09/23 17:17	SMC	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: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

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: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

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: Bandit 15 Federal Com #2

Job ID: 890-4462-1
SDG: 03D2024175

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4462-1	SS01	Solid	04/03/23 09:20	04/03/23 16:09	0.5'
890-4462-2	SS02	Solid	04/03/23 09:25	04/03/23 16:09	0.5'
890-4462-3	SS03	Solid	04/03/23 09:30	04/03/23 16:09	0.5'
890-4462-4	SS04	Solid	04/03/23 09:35	04/03/23 16:09	0.5'
890-4462-5	SS05	Solid	04/03/23 09:40	04/03/23 16:09	0.5'
890-4462-6	SS06	Solid	04/03/23 09:45	04/03/23 16:09	0.5'
890-4462-7	SS07	Solid	04/03/23 09:50	04/03/23 16:09	0.5'
890-4462-8	SS08	Solid	04/03/23 09:55	04/03/23 16:09	0.5'
890-4462-9	SS09	Solid	04/03/23 10:00	04/03/23 16:09	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:	Hadlie Green	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	432-557-8895	Email:	hgreen@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:	Bandit 15 Federal Com #2	Turn Around	
Project Number:	03D2024175	☒ Routine	☐ Rush
Project Location:	32.57111, -103.648333	Due Date:	5 day
Sampler's Name:	Bonni Hayes	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT	Temp Blank: Yes No (Yes circled)	Wet Ice: Yes No (Yes circled)
Samples Received Intact:	Yes No (Yes circled)	Thermometer ID: TNM-007
Cooler Custody Seals:	Yes No N/A (N/A circled)	Correction Factor: -0.2
Sample Custody Seals:	Yes No N/A (N/A circled)	Temperature Reading: 3.2
Total Containers:		Corrected Temperature: 3.0

ANALYSIS REQUEST — Parameters: BTEX, TPH, Cl⁻

890-4462 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	BTEX	TPH	Cl⁻	Sample Comments
SS01	S	4/3/23	0920	.5'	G	1	X	X	X	
SS02	↓	↓	0925	↓	↓	↓	↓	↓	↓	
SS03	↓	↓	0930	↓	↓	↓	↓	↓	↓	
SS04	↓	↓	0935	↓	↓	↓	↓	↓	↓	
SS05	↓	↓	0940	↓	↓	↓	↓	↓	↓	
SS06	↓	↓	0945	↓	↓	↓	↓	↓	↓	
SS07	↓	↓	0950	↓	↓	↓	↓	↓	↓	
SS08	↓	↓	0955	↓	↓	↓	↓	↓	↓	
SS09	↓	↓	1000	↓	↓	↓	↓	↓	↓	

RN 4/3/23

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

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 [signature]	[signature] Amanda Stef	4/3/23 1608	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4462-1
SDG Number: 03D2024175

Login Number: 4462
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: 890-4462-1
SDG Number: 03D2024175

Login Number: 4462
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 04/05/23 11:34 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 5/2/2023 10:13:38 AM

JOB DESCRIPTION

Bandit 15 Federal Com 002H
SDG NUMBER 03D2024175

JOB NUMBER

890-4572-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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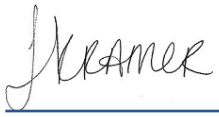
Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
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Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Laboratory Job ID: 890-4572-1
SDG: 03D2024175

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4572-1
Project/Site: Bandit 15 Federal Com 002H SDG: 03D2024175

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Job ID: 890-4572-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4572-1

Receipt
The samples were received on 4/25/2023 12:46 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-4572-1), FS02 (890-4572-2), FS03 (890-4572-3), FS04 (890-4572-4), FS05 (890-4572-5), FS06 (890-4572-6) and FS07 (890-4572-7).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-52079 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-52034 and analytical batch 880-52079 was outside the upper control limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-52003/5) and (LCS 880-52031/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-52031 and analytical batch 880-52003 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS01 (890-4572-1) and (890-4569-A-11-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS02 (890-4572-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS03 (890-4572-3), FS04 (890-4572-4), FS05 (890-4572-5), FS06 (890-4572-6) and FS07 (890-4572-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Client Sample ID: FS01

Lab Sample ID: 890-4572-1
Matrix: Solid
Date Collected: 04/24/23 11:35
Date Received: 04/25/23 12:46
Sample Depth: 1.0'

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		04/26/23 13:12	04/27/23 16:08	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 16:08	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 16:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/26/23 13:12	04/27/23 16:08	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 16:08	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/26/23 13:12	04/27/23 16:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*04/26/23 13:12*	*04/27/23 16:08*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*04/26/23 13:12*	*04/27/23 16:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/28/23 10:05	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			04/26/23 17:23	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		04/26/23 11:22	04/26/23 16:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/26/23 11:22	04/26/23 16:52	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/26/23 11:22	04/26/23 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*04/26/23 11:22*	*04/26/23 16:52*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*04/26/23 11:22*	*04/26/23 16:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**419**		4.98		mg/Kg			05/01/23 20:23	1

Client Sample ID: FS02

Lab Sample ID: 890-4572-2
Matrix: Solid
Date Collected: 04/24/23 11:40
Date Received: 04/25/23 12:46
Sample Depth: 1.0'

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		04/26/23 13:12	04/27/23 17:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 17:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 17:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/26/23 13:12	04/27/23 17:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 17:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/26/23 13:12	04/27/23 17:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*04/26/23 13:12*	*04/27/23 17:51*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Client Sample ID: FS02

Lab Sample ID: 890-4572-2
Matrix: Solid
Date Collected: 04/24/23 11:40
Date Received: 04/25/23 12:46
Sample Depth: 1.0'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*04/26/23 13:12*	*04/27/23 17:51*	*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			04/28/23 10:05	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			04/27/23 09:46	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		04/26/23 11:22	04/26/23 17:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/26/23 11:22	04/26/23 17:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/26/23 11:22	04/26/23 17:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*110*		*70 - 130*	*04/26/23 11:22*	*04/26/23 17:13*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*04/26/23 11:22*	*04/26/23 17:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**174**		4.98	mg/Kg			05/01/23 20:28	1

Client Sample ID: FS03

Lab Sample ID: 890-4572-3
Matrix: Solid
Date Collected: 04/24/23 11:45
Date Received: 04/25/23 12:46
Sample Depth: 1.0'

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		04/26/23 13:12	04/27/23 18:17	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/26/23 13:12	04/27/23 18:17	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/26/23 13:12	04/27/23 18:17	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/26/23 13:12	04/27/23 18:17	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/26/23 13:12	04/27/23 18:17	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/26/23 13:12	04/27/23 18:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*04/26/23 13:12*	*04/27/23 18:17*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*04/26/23 13:12*	*04/27/23 18:17*	*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			04/28/23 10:05	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			04/27/23 09:46	1

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Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Client Sample ID: FS03

Lab Sample ID: 890-4572-3
Matrix: Solid
Date Collected: 04/24/23 11:45
Date Received: 04/25/23 12:46
Sample Depth: 1.0'

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		04/26/23 11:22	04/26/23 17:56	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		04/26/23 11:22	04/26/23 17:56	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/26/23 11:22	04/26/23 17:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*04/26/23 11:22*	*04/26/23 17:56*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*04/26/23 11:22*	*04/26/23 17:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**705**		5.01		mg/Kg			05/01/23 20:34	1

Client Sample ID: FS04

Lab Sample ID: 890-4572-4
Matrix: Solid
Date Collected: 04/24/23 09:40
Date Received: 04/25/23 12:46
Sample Depth: 1.0'

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		04/26/23 13:12	04/27/23 18:42	1
Toluene	<0.00201	U	0.00201		mg/Kg		04/26/23 13:12	04/27/23 18:42	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		04/26/23 13:12	04/27/23 18:42	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		04/26/23 13:12	04/27/23 18:42	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		04/26/23 13:12	04/27/23 18:42	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		04/26/23 13:12	04/27/23 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*04/26/23 13:12*	*04/27/23 18:42*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*04/26/23 13:12*	*04/27/23 18:42*	*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			04/28/23 10:05	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			04/27/23 09:46	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		04/26/23 11:22	04/26/23 18:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/26/23 11:22	04/26/23 18:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/26/23 11:22	04/26/23 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*04/26/23 11:22*	*04/26/23 18:18*	*1*
o-Terphenyl	*134*	*S1+*	*70 - 130*	*04/26/23 11:22*	*04/26/23 18:18*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Client Sample ID: FS04

Lab Sample ID: 890-4572-4
Matrix: Solid
Date Collected: 04/24/23 09:40
Date Received: 04/25/23 12:46
Sample Depth: 1.0'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	455		5.00		mg/Kg			05/01/23 20:39	1

Client Sample ID: FS05

Lab Sample ID: 890-4572-5
Matrix: Solid
Date Collected: 04/24/23 09:45
Date Received: 04/25/23 12:46
Sample Depth: 1.0'

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		04/26/23 13:12	04/27/23 19:08	1
Toluene	<0.00201	U	0.00201		mg/Kg		04/26/23 13:12	04/27/23 19:08	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		04/26/23 13:12	04/27/23 19:08	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		04/26/23 13:12	04/27/23 19:08	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		04/26/23 13:12	04/27/23 19:08	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		04/26/23 13:12	04/27/23 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*04/26/23 13:12*	*04/27/23 19:08*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*04/26/23 13:12*	*04/27/23 19:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			04/28/23 10:05	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			04/27/23 09:46	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		04/26/23 11:22	04/26/23 18:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/26/23 11:22	04/26/23 18:40	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/26/23 11:22	04/26/23 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*04/26/23 11:22*	*04/26/23 18:40*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*04/26/23 11:22*	*04/26/23 18:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	214		5.05		mg/Kg			05/01/23 20:44	1

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Client Sample ID: FS06

Lab Sample ID: 890-4572-6
Matrix: Solid
Date Collected: 04/24/23 09:50
Date Received: 04/25/23 12:46
Sample Depth: 1.0'

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		04/26/23 13:12	04/27/23 19:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 19:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 19:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/26/23 13:12	04/27/23 19:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 19:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/26/23 13:12	04/27/23 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*04/26/23 13:12*	*04/27/23 19:34*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*04/26/23 13:12*	*04/27/23 19:34*	*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			04/28/23 10:05	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			04/27/23 09:46	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		04/26/23 11:22	04/26/23 19:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/26/23 11:22	04/26/23 19:01	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/26/23 11:22	04/26/23 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*04/26/23 11:22*	*04/26/23 19:01*	*1*
o-Terphenyl	*133*	*S1+*	*70 - 130*	*04/26/23 11:22*	*04/26/23 19:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**81.8**		5.04		mg/Kg			05/01/23 20:50	1

Client Sample ID: FS07

Lab Sample ID: 890-4572-7
Matrix: Solid
Date Collected: 04/24/23 09:55
Date Received: 04/25/23 12:46
Sample Depth: 1.0'

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		04/26/23 13:12	04/27/23 20:00	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 20:00	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 20:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/26/23 13:12	04/27/23 20:00	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/26/23 13:12	04/27/23 20:00	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/26/23 13:12	04/27/23 20:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*04/26/23 13:12*	*04/27/23 20:00*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Client Sample ID: FS07
Date Collected: 04/24/23 09:55
Date Received: 04/25/23 12:46
Sample Depth: 1.0'

Lab Sample ID: 890-4572-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*04/26/23 13:12*	*04/27/23 20:00*	*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			04/28/23 10:05	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			04/27/23 09:46	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		04/26/23 11:22	04/26/23 19:23	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		04/26/23 11:22	04/26/23 19:23	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/26/23 11:22	04/26/23 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*04/26/23 11:22*	*04/26/23 19:23*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*04/26/23 11:22*	*04/26/23 19:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**217**		4.98		mg/Kg			05/01/23 21:06	1

Surrogate Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

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)
890-4564-A-1-C MS	Matrix Spike	94	86
890-4564-A-1-D MSD	Matrix Spike Duplicate	117	94
890-4572-1	FS01	125	98
890-4572-2	FS02	110	93
890-4572-3	FS03	126	97
890-4572-4	FS04	121	93
890-4572-5	FS05	111	89
890-4572-6	FS06	118	90
890-4572-7	FS07	116	97
LCS 880-52034/1-A	Lab Control Sample	105	101
LCSD 880-52034/2-A	Lab Control Sample Dup	110	80
MB 880-52034/5-A	Method Blank	59 S1-	86

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-4569-A-11-B MS	Matrix Spike	127	130
890-4569-A-11-E MSD	Matrix Spike Duplicate	128	130
890-4572-1	FS01	113	135 S1+
890-4572-2	FS02	110	131 S1+
890-4572-3	FS03	110	131 S1+
890-4572-4	FS04	112	134 S1+
890-4572-5	FS05	110	131 S1+
890-4572-6	FS06	112	133 S1+
890-4572-7	FS07	109	131 S1+
LCS 880-52031/2-A	Lab Control Sample	114	135 S1+
LCSD 880-52031/3-A	Lab Control Sample Dup	110	129
MB 880-52031/1-A	Method Blank	124	147 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-52034/5-A
Matrix: Solid
Analysis Batch: 52079

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52034

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/26/23 13:12	04/27/23 11:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/26/23 13:12	04/27/23 11:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/26/23 13:12	04/27/23 11:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/26/23 13:12	04/27/23 11:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/26/23 13:12	04/27/23 11:49	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/26/23 13:12	04/27/23 11:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*59*	*S1-*	*70 - 130*	*04/26/23 13:12*	*04/27/23 11:49*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*04/26/23 13:12*	*04/27/23 11:49*	*1*

Lab Sample ID: LCS 880-52034/1-A
Matrix: Solid
Analysis Batch: 52079

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52034

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1181		mg/Kg		118	70 - 130		
Toluene			0.100	0.1194		mg/Kg		119	70 - 130		
Ethylbenzene			0.100	0.1061		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2168		mg/Kg		108	70 - 130		
o-Xylene			0.100	0.1025		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-52034/2-A
Matrix: Solid
Analysis Batch: 52079

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52034

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1131		mg/Kg		113	70 - 130	4	35
Toluene			0.100	0.1153		mg/Kg		115	70 - 130	3	35
Ethylbenzene			0.100	0.1026		mg/Kg		103	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2101		mg/Kg		105	70 - 130	3	35
o-Xylene			0.100	0.1017		mg/Kg		102	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*

Lab Sample ID: 890-4564-A-1-C MS
Matrix: Solid
Analysis Batch: 52079

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52034

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.1127		mg/Kg		113	70 - 130		
Toluene	<0.00199	U	0.0998	0.1112		mg/Kg		111	70 - 130		

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QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

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

Lab Sample ID: 890-4564-A-1-C MS
Matrix: Solid
Analysis Batch: 52079

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52034

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0998	0.09190		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1859		mg/Kg		93	70 - 130
o-Xylene	<0.00199	U	0.0998	0.09113		mg/Kg		91	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*

Lab Sample ID: 890-4564-A-1-D MSD
Matrix: Solid
Analysis Batch: 52079

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52034

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0990	0.1092		mg/Kg		110	70 - 130	3	35
Toluene	<0.00199	U	0.0990	0.1105		mg/Kg		112	70 - 130	1	35
Ethylbenzene	<0.00199	U	0.0990	0.09275		mg/Kg		94	70 - 130	1	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1889		mg/Kg		95	70 - 130	2	35
o-Xylene	<0.00199	U	0.0990	0.09325		mg/Kg		94	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

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

Lab Sample ID: MB 880-52031/1-A
Matrix: Solid
Analysis Batch: 52003

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52031

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		04/26/23 08:00	04/26/23 08:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/26/23 08:00	04/26/23 08:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/26/23 08:00	04/26/23 08:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*04/26/23 08:00*	*04/26/23 08:12*	*1*
o-Terphenyl	*147*	*S1+*	*70 - 130*	*04/26/23 08:00*	*04/26/23 08:12*	*1*

Lab Sample ID: LCS 880-52031/2-A
Matrix: Solid
Analysis Batch: 52003

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52031

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1142		mg/Kg		114	70 - 130
Diesel Range Organics (Over C10-C28)			1000	915.6		mg/Kg		92	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

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

Lab Sample ID: LCS 880-52031/2-A
Matrix: Solid
Analysis Batch: 52003

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52031

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	135	S1+	70 - 130

Lab Sample ID: LCSD 880-52031/3-A
Matrix: Solid
Analysis Batch: 52003

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52031

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1146		mg/Kg		115	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	891.5		mg/Kg		89	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	129		70 - 130

Lab Sample ID: 890-4569-A-11-B MS
Matrix: Solid
Analysis Batch: 52003

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1005		mg/Kg		101	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1055		mg/Kg		101	70 - 130

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

Lab Sample ID: 890-4569-A-11-E MSD
Matrix: Solid
Analysis Batch: 52003

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52031

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1031		mg/Kg		103	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1060		mg/Kg		102	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	128		70 - 130
o-Terphenyl	130		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-52095/1-A
Matrix: Solid
Analysis Batch: 52349

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			05/01/23 19:19	1

Lab Sample ID: LCS 880-52095/2-A
Matrix: Solid
Analysis Batch: 52349

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	237.3		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-52095/3-A
Matrix: Solid
Analysis Batch: 52349

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	237.8		mg/Kg		95	90 - 110	0	20

Lab Sample ID: 890-4572-6 MS
Matrix: Solid
Analysis Batch: 52349

Client Sample ID: FS06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	81.8		252	321.9		mg/Kg		95	90 - 110		

Lab Sample ID: 890-4572-6 MSD
Matrix: Solid
Analysis Batch: 52349

Client Sample ID: FS06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	81.8		252	322.2		mg/Kg		95	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

GC VOA

Prep Batch: 52034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4572-1	FS01	Total/NA	Solid	5035	
890-4572-2	FS02	Total/NA	Solid	5035	
890-4572-3	FS03	Total/NA	Solid	5035	
890-4572-4	FS04	Total/NA	Solid	5035	
890-4572-5	FS05	Total/NA	Solid	5035	
890-4572-6	FS06	Total/NA	Solid	5035	
890-4572-7	FS07	Total/NA	Solid	5035	
MB 880-52034/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-52034/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-52034/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4564-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-4564-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 52079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4572-1	FS01	Total/NA	Solid	8021B	52034
890-4572-2	FS02	Total/NA	Solid	8021B	52034
890-4572-3	FS03	Total/NA	Solid	8021B	52034
890-4572-4	FS04	Total/NA	Solid	8021B	52034
890-4572-5	FS05	Total/NA	Solid	8021B	52034
890-4572-6	FS06	Total/NA	Solid	8021B	52034
890-4572-7	FS07	Total/NA	Solid	8021B	52034
MB 880-52034/5-A	Method Blank	Total/NA	Solid	8021B	52034
LCS 880-52034/1-A	Lab Control Sample	Total/NA	Solid	8021B	52034
LCSD 880-52034/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	52034
890-4564-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	52034
890-4564-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	52034

Analysis Batch: 52192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4572-1	FS01	Total/NA	Solid	Total BTEX	
890-4572-2	FS02	Total/NA	Solid	Total BTEX	
890-4572-3	FS03	Total/NA	Solid	Total BTEX	
890-4572-4	FS04	Total/NA	Solid	Total BTEX	
890-4572-5	FS05	Total/NA	Solid	Total BTEX	
890-4572-6	FS06	Total/NA	Solid	Total BTEX	
890-4572-7	FS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 52003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4572-1	FS01	Total/NA	Solid	8015B NM	52031
890-4572-2	FS02	Total/NA	Solid	8015B NM	52031
890-4572-3	FS03	Total/NA	Solid	8015B NM	52031
890-4572-4	FS04	Total/NA	Solid	8015B NM	52031
890-4572-5	FS05	Total/NA	Solid	8015B NM	52031
890-4572-6	FS06	Total/NA	Solid	8015B NM	52031
890-4572-7	FS07	Total/NA	Solid	8015B NM	52031
MB 880-52031/1-A	Method Blank	Total/NA	Solid	8015B NM	52031
LCS 880-52031/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	52031

QC Association Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

GC Semi VOA (Continued)

Analysis Batch: 52003 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-52031/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	52031
890-4569-A-11-B MS	Matrix Spike	Total/NA	Solid	8015B NM	52031
890-4569-A-11-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	52031

Prep Batch: 52031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4572-1	FS01	Total/NA	Solid	8015NM Prep	
890-4572-2	FS02	Total/NA	Solid	8015NM Prep	
890-4572-3	FS03	Total/NA	Solid	8015NM Prep	
890-4572-4	FS04	Total/NA	Solid	8015NM Prep	
890-4572-5	FS05	Total/NA	Solid	8015NM Prep	
890-4572-6	FS06	Total/NA	Solid	8015NM Prep	
890-4572-7	FS07	Total/NA	Solid	8015NM Prep	
MB 880-52031/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-52031/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-52031/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4569-A-11-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4569-A-11-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 52061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4572-1	FS01	Total/NA	Solid	8015 NM	
890-4572-2	FS02	Total/NA	Solid	8015 NM	
890-4572-3	FS03	Total/NA	Solid	8015 NM	
890-4572-4	FS04	Total/NA	Solid	8015 NM	
890-4572-5	FS05	Total/NA	Solid	8015 NM	
890-4572-6	FS06	Total/NA	Solid	8015 NM	
890-4572-7	FS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 52095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4572-1	FS01	Soluble	Solid	DI Leach	
890-4572-2	FS02	Soluble	Solid	DI Leach	
890-4572-3	FS03	Soluble	Solid	DI Leach	
890-4572-4	FS04	Soluble	Solid	DI Leach	
890-4572-5	FS05	Soluble	Solid	DI Leach	
890-4572-6	FS06	Soluble	Solid	DI Leach	
890-4572-7	FS07	Soluble	Solid	DI Leach	
MB 880-52095/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-52095/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-52095/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4572-6 MS	FS06	Soluble	Solid	DI Leach	
890-4572-6 MSD	FS06	Soluble	Solid	DI Leach	

Analysis Batch: 52349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4572-1	FS01	Soluble	Solid	300.0	52095
890-4572-2	FS02	Soluble	Solid	300.0	52095
890-4572-3	FS03	Soluble	Solid	300.0	52095

QC Association Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

HPLC/IC (Continued)

Analysis Batch: 52349 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4572-4	FS04	Soluble	Solid	300.0	52095
890-4572-5	FS05	Soluble	Solid	300.0	52095
890-4572-6	FS06	Soluble	Solid	300.0	52095
890-4572-7	FS07	Soluble	Solid	300.0	52095
MB 880-52095/1-A	Method Blank	Soluble	Solid	300.0	52095
LCS 880-52095/2-A	Lab Control Sample	Soluble	Solid	300.0	52095
LCSD 880-52095/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	52095
890-4572-6 MS	FS06	Soluble	Solid	300.0	52095
890-4572-6 MSD	FS06	Soluble	Solid	300.0	52095

Lab Chronicle

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Client Sample ID: FS01

Lab Sample ID: 890-4572-1
Matrix: Solid
Date Collected: 04/24/23 11:35
Date Received: 04/25/23 12:46

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	52034	04/26/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52079	04/27/23 16:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52192	04/28/23 10:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			52061	04/26/23 17:23	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	52031	04/26/23 11:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52003	04/26/23 16:52	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	52095	04/27/23 10:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52349	05/01/23 20:23	SMC	EET MID

Client Sample ID: FS02

Lab Sample ID: 890-4572-2
Matrix: Solid
Date Collected: 04/24/23 11:40
Date Received: 04/25/23 12:46

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	52034	04/26/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52079	04/27/23 17:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52192	04/28/23 10:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			52061	04/27/23 09:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52031	04/26/23 11:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52003	04/26/23 17:13	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	52095	04/27/23 10:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52349	05/01/23 20:28	SMC	EET MID

Client Sample ID: FS03

Lab Sample ID: 890-4572-3
Matrix: Solid
Date Collected: 04/24/23 11:45
Date Received: 04/25/23 12:46

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	52034	04/26/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52079	04/27/23 18:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52192	04/28/23 10:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			52061	04/27/23 09:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	52031	04/26/23 11:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52003	04/26/23 17:56	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	52095	04/27/23 10:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52349	05/01/23 20:34	SMC	EET MID

Client Sample ID: FS04

Lab Sample ID: 890-4572-4
Matrix: Solid
Date Collected: 04/24/23 09:40
Date Received: 04/25/23 12:46

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	52034	04/26/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52079	04/27/23 18:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52192	04/28/23 10:05	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Client Sample ID: FS04

Date Collected: 04/24/23 09:40
Date Received: 04/25/23 12:46

Lab Sample ID: 890-4572-4

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			52061	04/27/23 09:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52031	04/26/23 11:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52003	04/26/23 18:18	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	52095	04/27/23 10:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52349	05/01/23 20:39	SMC	EET MID

Client Sample ID: FS05

Date Collected: 04/24/23 09:45
Date Received: 04/25/23 12:46

Lab Sample ID: 890-4572-5

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			4.98 g	5 mL	52034	04/26/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52079	04/27/23 19:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52192	04/28/23 10:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			52061	04/27/23 09:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	52031	04/26/23 11:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52003	04/26/23 18:40	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	52095	04/27/23 10:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52349	05/01/23 20:44	SMC	EET MID

Client Sample ID: FS06

Date Collected: 04/24/23 09:50
Date Received: 04/25/23 12:46

Lab Sample ID: 890-4572-6

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			5.02 g	5 mL	52034	04/26/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52079	04/27/23 19:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52192	04/28/23 10:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			52061	04/27/23 09:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52031	04/26/23 11:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52003	04/26/23 19:01	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	52095	04/27/23 10:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52349	05/01/23 20:50	SMC	EET MID

Client Sample ID: FS07

Date Collected: 04/24/23 09:55
Date Received: 04/25/23 12:46

Lab Sample ID: 890-4572-7

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			5.02 g	5 mL	52034	04/26/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52079	04/27/23 20:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52192	04/28/23 10:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			52061	04/27/23 09:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	52031	04/26/23 11:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52003	04/26/23 19:23	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Client Sample ID: FS07

Date Collected: 04/24/23 09:55
Date Received: 04/25/23 12:46

Lab Sample ID: 890-4572-7

Matrix: Solid

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	52095	04/27/23 10:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52349	05/01/23 21:06	SMC	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: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

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: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

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: Bandit 15 Federal Com 002H

Job ID: 890-4572-1
SDG: 03D2024175

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4572-1	FS01	Solid	04/24/23 11:35	04/25/23 12:46	1.0'
890-4572-2	FS02	Solid	04/24/23 11:40	04/25/23 12:46	1.0'
890-4572-3	FS03	Solid	04/24/23 11:45	04/25/23 12:46	1.0'
890-4572-4	FS04	Solid	04/24/23 09:40	04/25/23 12:46	1.0'
890-4572-5	FS05	Solid	04/24/23 09:45	04/25/23 12:46	1.0'
890-4572-6	FS06	Solid	04/24/23 09:50	04/25/23 12:46	1.0'
890-4572-7	FS07	Solid	04/24/23 09:55	04/25/23 12:46	1.0'

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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:	432-557-8895	Email:	hgreen@ensolum.com, 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:	Bandit 15 Federal Com 002H	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024175	Due Date:	
Project Location:	32.5710,-103.64899	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Peter Van Patten		
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TAM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.6	
Total Containers:		Corrected Temperature:	1.4	

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	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
FS01	Soil	4/24/2023	1135	1.0'	Comp	1		x	x	x	
FS02	Soil	4/24/2023	1140	1.0'	Comp	1		x	x	x	
FS03	Soil	4/24/2023	1145	1.0'	Comp	1		x	x	x	
FS04	Soil	4/25/2023	940	1.0'	Comp	1		x	x	x	
FS05	Soil	4/25/2023	945	1.0'	Comp	1		x	x	x	
FS06	Soil	4/25/2023	950	1.0'	Comp	1		x	x	x	
FS07	Soil	4/25/2023	955	1.0'	Comp	1		x	x	x	

ANALYSIS REQUEST

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 Peter Van Patten	Amanda Stuff	4/25/23 1246			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4572-1
SDG Number: 03D2024175

Login Number: 4572
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: 890-4572-1
SDG Number: 03D2024175

Login Number: 4572
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 04/26/23 11:11 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 5/11/2023 8:33:02 AM

JOB DESCRIPTION

Bandit 15 Federal Com 002
SDG NUMBER 03D2024175

JOB NUMBER

890-4624-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

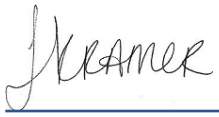
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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
5/11/2023 8:33:02 AM

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

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002

Laboratory Job ID: 890-4624-1
SDG: 03D2024175

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4624-1
Project/Site: Bandit 15 Federal Com 002 SDG: 03D2024175

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.

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: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

Job ID: 890-4624-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4624-1

Receipt
The sample was received on 5/4/2023 1:26 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: FS03A (890-4624-1).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-52692 recovered above the upper control limit for Ethylbenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-52692/2), (CCV 880-52692/20) and (CCV 880-52692/33).

Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-52673 and analytical batch 880-52692 recovered outside control limits for the following analytes: Benzene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53015 and analytical batch 880-52997 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS03A (890-4624-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D: The method blank associated with preparation batch 880-52848 and 880-52848 and analytical batch 880-53032 contained Chloride greater than one-half the reporting limit (RL). The samples were not re-analyzed because all samples were greater than 10 times the detection of the Method Blank (MB). The sample results have been qualified and reported.FS03A (890-4624-1), (MB 880-52848/1-A) and (880-27940-A-81-D)

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-52848 and analytical batch 880-53032 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.

Client Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

Client Sample ID: FS03A

Date Collected: 05/04/23 10:55
Date Received: 05/04/23 13:26
Sample Depth: 1.25'

Lab Sample ID: 890-4624-1

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		05/05/23 12:00	05/05/23 23:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/05/23 12:00	05/05/23 23:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/05/23 12:00	05/05/23 23:03	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/05/23 12:00	05/05/23 23:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/05/23 12:00	05/05/23 23:03	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/05/23 12:00	05/05/23 23:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*05/05/23 12:00*	*05/05/23 23:03*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/05/23 12:00*	*05/05/23 23:03*	*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			05/08/23 16:06	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			05/10/23 19:11	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		05/10/23 10:09	05/10/23 17:43	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/10/23 10:09	05/10/23 17:43	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/10/23 10:09	05/10/23 17:43	1
Total TPH	<49.8	U	49.8		mg/Kg		05/10/23 10:09	05/10/23 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*135*	*S1+*	*70 - 130*	*05/10/23 10:09*	*05/10/23 17:43*	*1*
o-Terphenyl	*105*		*70 - 130*	*05/10/23 10:09*	*05/10/23 17:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**278**	**B**	5.04		mg/Kg			05/09/23 17:56	1

Surrogate Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

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)
880-28006-A-1-A MS	Matrix Spike	115	104
880-28006-A-1-B MSD	Matrix Spike Duplicate	120	93
890-4624-1	FS03A	116	94
LCS 880-52673/1-A	Lab Control Sample	110	102
LCSD 880-52673/2-A	Lab Control Sample Dup	116	94
MB 880-52673/5-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)
890-4624-1	FS03A	135 S1+	105
890-4629-A-1-E MS	Matrix Spike	107	77
890-4629-A-1-F MSD	Matrix Spike Duplicate	101	74
LCS 880-53015/2-A	Lab Control Sample	106	82
LCSD 880-53015/3-A	Lab Control Sample Dup	119	91
MB 880-53015/1-A	Method Blank	137 S1+	110

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-52673/5-A
Matrix: Solid
Analysis Batch: 52692

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52673

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/05/23 09:47	05/05/23 14:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/05/23 09:47	05/05/23 14:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/05/23 09:47	05/05/23 14:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/05/23 09:47	05/05/23 14:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/05/23 09:47	05/05/23 14:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/05/23 09:47	05/05/23 14:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/05/23 09:47*	*05/05/23 14:17*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*05/05/23 09:47*	*05/05/23 14:17*	*1*

Lab Sample ID: LCS 880-52673/1-A
Matrix: Solid
Analysis Batch: 52692

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52673

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1186		mg/Kg		119	70 - 130		
Toluene			0.100	0.1120		mg/Kg		112	70 - 130		
Ethylbenzene			0.100	0.1051		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2075		mg/Kg		104	70 - 130		
o-Xylene			0.100	0.09646		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-52673/2-A
Matrix: Solid
Analysis Batch: 52692

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52673

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1318	*+	mg/Kg		132	70 - 130	11	35
Toluene			0.100	0.1133		mg/Kg		113	70 - 130	1	35
Ethylbenzene			0.100	0.1114		mg/Kg		111	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2239		mg/Kg		112	70 - 130	8	35
o-Xylene			0.100	0.1054		mg/Kg		105	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 880-28006-A-1-A MS
Matrix: Solid
Analysis Batch: 52692

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52673

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U *+	0.0998	0.1014		mg/Kg		102	70 - 130		
Toluene	<0.00202	U	0.0998	0.09321		mg/Kg		93	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

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

Lab Sample ID: 880-28006-A-1-A MS
Matrix: Solid
Analysis Batch: 52692

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52673

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0998	0.08961		mg/Kg		90	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1773		mg/Kg		89	70 - 130
o-Xylene	<0.00202	U	0.0998	0.08705		mg/Kg		87	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-28006-A-1-B MSD
Matrix: Solid
Analysis Batch: 52692

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52673

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U *+	0.0990	0.1018		mg/Kg		103	70 - 130	0	35
Toluene	<0.00202	U	0.0990	0.09503		mg/Kg		96	70 - 130	2	35
Ethylbenzene	<0.00202	U	0.0990	0.09147		mg/Kg		92	70 - 130	2	35
m-Xylene & p-Xylene	<0.00403	U	0.198	0.1796		mg/Kg		91	70 - 130	1	35
o-Xylene	<0.00202	U	0.0990	0.08700		mg/Kg		87	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

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

Lab Sample ID: MB 880-53015/1-A
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53015

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		05/10/23 08:09	05/10/23 09:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/10/23 08:09	05/10/23 09:04	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/10/23 08:09	05/10/23 09:04	1
Total TPH	<50.0	U	50.0		mg/Kg		05/10/23 08:09	05/10/23 09:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*137*	*S1+*	*70 - 130*	*05/10/23 08:09*	*05/10/23 09:04*	*1*
o-Terphenyl	*110*		*70 - 130*	*05/10/23 08:09*	*05/10/23 09:04*	*1*

Lab Sample ID: LCS 880-53015/2-A
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53015

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	982.4		mg/Kg		98	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

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

Lab Sample ID: LCS 880-53015/2-A
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53015

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics (Over C10-C28)			1000	1028		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

Lab Sample ID: LCSD 880-53015/3-A
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53015

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1012		mg/Kg		101	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1085		mg/Kg		109	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Lab Sample ID: 890-4629-A-1-E MS
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53015

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	870.1		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	780.5		mg/Kg		76	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*77*		*70 - 130*

Lab Sample ID: 890-4629-A-1-F MSD
Matrix: Solid
Analysis Batch: 52997

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53015

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	830.0		mg/Kg		83	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	745.3		mg/Kg		72	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*74*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-52848/1-A
Matrix: Solid
Analysis Batch: 53032

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.955		5.00		mg/Kg			05/09/23 15:59	1

Lab Sample ID: LCS 880-52848/2-A
Matrix: Solid
Analysis Batch: 53032

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.9		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-52848/3-A
Matrix: Solid
Analysis Batch: 53032

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	270.6		mg/Kg		108	90 - 110	6	20

Lab Sample ID: 880-27940-A-81-E MS
Matrix: Solid
Analysis Batch: 53032

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	259	B	251	495.8		mg/Kg		94	90 - 110		

Lab Sample ID: 880-27940-A-81-F MSD
Matrix: Solid
Analysis Batch: 53032

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	259	B	251	508.9		mg/Kg		100	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

GC VOA

Prep Batch: 52673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4624-1	FS03A	Total/NA	Solid	5035	
MB 880-52673/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-52673/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-52673/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-28006-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-28006-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 52692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4624-1	FS03A	Total/NA	Solid	8021B	52673
MB 880-52673/5-A	Method Blank	Total/NA	Solid	8021B	52673
LCS 880-52673/1-A	Lab Control Sample	Total/NA	Solid	8021B	52673
LCSD 880-52673/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	52673
880-28006-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	52673
880-28006-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	52673

Analysis Batch: 52874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4624-1	FS03A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 52997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4624-1	FS03A	Total/NA	Solid	8015B NM	53015
MB 880-53015/1-A	Method Blank	Total/NA	Solid	8015B NM	53015
LCS 880-53015/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53015
LCSD 880-53015/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53015
890-4629-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	53015
890-4629-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53015

Prep Batch: 53015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4624-1	FS03A	Total/NA	Solid	8015NM Prep	
MB 880-53015/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53015/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53015/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4629-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4629-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4624-1	FS03A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 52848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4624-1	FS03A	Soluble	Solid	DI Leach	
MB 880-52848/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-52848/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-52848/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

HPLC/IC (Continued)

Leach Batch: 52848 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-27940-A-81-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-27940-A-81-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 53032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4624-1	FS03A	Soluble	Solid	300.0	52848
MB 880-52848/1-A	Method Blank	Soluble	Solid	300.0	52848
LCS 880-52848/2-A	Lab Control Sample	Soluble	Solid	300.0	52848
LCSD 880-52848/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	52848
880-27940-A-81-E MS	Matrix Spike	Soluble	Solid	300.0	52848
880-27940-A-81-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	52848

Lab Chronicle

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

Client Sample ID: FS03A

Date Collected: 05/04/23 10:55
Date Received: 05/04/23 13:26

Lab Sample ID: 890-4624-1

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			5.01 g	5 mL	52673	05/05/23 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52692	05/05/23 23:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52874	05/08/23 16:06	AJ	EET MID
Total/NA	Analysis	8015 NM		1			53071	05/10/23 19:11	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53015	05/10/23 10:09	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52997	05/10/23 17:43	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	52848	05/08/23 13:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53032	05/09/23 17:56	SMC	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: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

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
8015B NM	8015NM Prep	Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

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: Bandit 15 Federal Com 002

Job ID: 890-4624-1
SDG: 03D2024175

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4624-1	FS03A	Solid	05/04/23 10:55	05/04/23 13:26	1.25'

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:	432-557-8895	Email:	hgreen@ensolum.com, 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:	Bandit 15 Federal Com 002	Turn Around	
Project Number:	03D2024175	☑ Routine ☐ Rush	
Project Location:	32.5710,-103.6489	Due Date:	
Sampler's Name:	Peter Van Patten	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:	TM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.8
Total Containers:		Corrected Temperature:	2.6

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS03A	Soil	5/4/2023	1055	1.25'	Comp	1		x	x	x

890-4624 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

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 Peter Van Patten	Amanda Luff	5/5/23 1326	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4624-1
SDG Number: 03D2024175

Login Number: 4624
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: 890-4624-1
SDG Number: 03D2024175

Login Number: 4624
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/05/23 10:46 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	

ENSOLUM

APPENDIX D

NMOCD Notifications

From:	Enviro, OCD, EMNRD
To:	Hadlie Green
Cc:	Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject:	RE: [EXTERNAL] COG - Containment Inspection - Bandit 15 Federal Com 002 (Incident Number NAPP2307544597)
Date:	Friday, March 31, 2023 10:09:55 AM
Attachments:	image005.jpg image006.png image007.png image008.png image009.png

[**EXTERNAL EMAIL**]

Hadlie,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, March 30, 2023 8:34 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] COG - Containment Inspection - Bandit 15 Federal Com 002 (Incident Number NAPP2307544597)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

To Whom It May Concern,

Below is an email notification for liner inspection at COG Operating, LLC (COG) Bandit 15 Federal Com 002 (Incident Number NAPP2307544597) / Spill Date 3-2-2023. This is a notification that Ensolum is scheduled to inspect this lined containment on behalf of COG on Monday, April 3, 2023. Please call with any questions or concerns.

GPS: 32.5710, -103.6489

Thank you,

Hadlie Green
Project Manager
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 4/17/2023)
Date: Friday, April 14, 2023 10:36:57 AM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file
JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, April 13, 2023 8:51 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] COP - Sampling Notification (Week of 4/17/2023)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

ConocoPhillips Company (COP) plans to complete sampling activities at the following sites the week of April 17, 2023.

- Wilder 28-1 / NAPP2301736973
  - Sampling Date: 4/17-19/2023 @ 10:00 AM MST
- Bandit 15 Federal Com 002H / NAPP2307544597
  - Sampling Date: 4/21/2023 @ 10:00 AM MST

Thank you,

Hadlie Green
Project Geologist
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 4/24/2023)
Date: Thursday, April 20, 2023 4:32:26 PM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

Please be aware that notification requirements are **two business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to insure inclusion in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, April 20, 2023 2:33 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] COP - Sampling Notification (Week of 4/24/2023)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

ConocoPhillips Company (COP) plans to complete sampling activities at the following sites the week of April 24, 2023.

- Bandit 15 Federal Com 002H / NAPP2307544597
  - Sampling Date: 4/24-26/2023 @ 10:00 AM MST

- Jazzmaster 17 ST 3H / NAPP2306543550
  - Sampling Date: 4/27/2023 @ 10:00 AM MST
- Treasure Island Federal 1H / NAPP2310337528
  - Sampling Date: 4/28/2023 @ 10:00 AM MST

Thank you,

Hadlie Green
Project Geologist
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

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	NAPP2307544597
District RP	
Facility ID	fAPP2202651171
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Charles Beauvais	Contact Telephone	(575) 988-2043
Contact email	Charles.R.Beauvais@ConocoPhillips.com	Incident # *(assigned by OCD)*	NAPP2307544597
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.5710 Longitude -103.6489

(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Bandit 15 Federal Com 002	Site Type	Tank Battery
Date Release Discovered	March 2, 2023	API# *(if applicable)*	30-025-37231

Unit Letter	Section	Township	Range	County
J	15	20S	33E	Lea

Surface Owner: ☐ State ■ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

■ Crude Oil	Volume Released (bbls) 0.19	Volume Recovered (bbls) 0.17
■ Produced Water	Volume Released (bbls) 18.7	Volume Recovered (bbls) 16.83
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	■ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a hole in the bottom of a tank due to corrosion.
The release was on the pad within a unlined berm. A vacuum truck was dispatched to remove all freestanding fluids.
Evaluation will be made of the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2307544597
District RP	
Facility ID	fAPP2202651171
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: Brittany N. Esparza Title: Environmental Technician

Signature: Brittany Esparza Date: 3/16/2023

email: Brittany.Esparza@ConocoPhillips.com Telephone: (432) 221-0398

OCD Only

Received by: Jocelyn Harimon Date: 03/16/2023

NAPP2307544597

Spill Calculation - Subsurface Spill - Rectangle											Remediation Recommendation	
Convert Irregular Shape into a series of rectangles	Length (ft.)	Width (ft.)	Average Depth (in.)	Pad (dropdown)	Soil Spilled-Fluid Saturation (%.)	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture (%.)	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)	Total Estimated Volume of Contaminated Soil, uncompacted, 25% (yd^3.)	Rule of Thumb - RMR Handover Volume, (yd^3.)
Rectangle A	86.0	47.0	3.0	On-Pad	10.50%	179.87	18.89	1%	0.19	18.70	46.78	750
Rectangle B				On-Pad	10.50%	0.00	0.00		0.00	0.00	0.00	
Rectangle C				On-Pad	10.50%	0.00	0.00		0.00	0.00	0.00	
Rectangle D						0.00					0.00	
Rectangle E						0.00					0.00	
Rectangle F						0.00					0.00	
Rectangle G						0.00					0.00	
Rectangle H						0.00					0.00	
Rectangle I						0.00					0.00	
Rectangle J						0.00					0.00	
					Total Subsurface Volume Released:		18.89		0.19	18.70	46.78	BU

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 197974

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 197974
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	3/16/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2307544597
District RP	
Facility ID	fAPP2202651171
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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2307544597
District RP	
Facility ID	fAPP2202651171
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: _____5/26/2023_____

email: __Jacob.Laird@conocophillips.com_____ Telephone: ___575-703-5482_____

OCD Only

Received by: ____Jocelyn Harimon_____ Date: 05/25/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2307544597
District RP	
Facility ID	fAPP2202651171
Application ID	

Closure

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

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jacob Laird Title: Environmental Engineer

Signature: Jacob Laird Date: 5/26/2023

email: Jacob.Laird@conocophillips.com Telephone: 575-703-5482

OCD Only

Received by: Jocelyn Harimon Date: 05/25/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Nelson Velez Date: 08/11/2023

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

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 220664

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 220664
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	8/11/2023