Received by OCD: 4/24/2023 11:36:26 AM

Deferral Request
Approved 06/21/2023

ENSOLUM

April 18, 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: Deferral Request Addendum
Zia Hills 19-1
Incident Number NAPP2215827276
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of ConocoPhillips Company (COP), has prepared this *Deferral Request Addendum* to document assessment, excavation, and soil sampling activities performed at the Zia Hills 19-1 (Site) as outlined in an approved *Remediation Work Plan (RWP),* dated February 21, 2023. The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of crude oil and produced water on pad. Based on assessment and excavation activities, as well as laboratory analytical results from soil sampling events, COP is submitting this *Deferral Request Addendum* for Incident Number NAPP2215827276.

All of the release details regarding the incident, Site characterization, and remediation conducted can be referenced in the original *Deferral Request* submitted on November 21, 2022. On December 19, 2022, the New Mexico Oil Conservation Division (NMOCD) denied the original *Deferral Request* for Incident Number NAPP2215827276 for the following reason:

> *Deferral Request Denied. The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. Please submit dtw data before OCD can evaluate the defferal. Please submit a revised Deferral Request by January 19, 2023.*

Although the denial requested submittal of a deferral request, it was not possible to coordinate land access, permit a boring with the New Mexico Office of the State Enginner (NMOSE), schedule fieldwork with limited drillers' availability, then collect and analyze new data within 30 days. The *RWP* was submitted in lieu of a deferral request. The *RWP* proposed installation of a boring to investiagate depth to water and confirm the Site Closure Criteria.

Released to Imaging: 6/21/2023 2:22:52 PM

DEPTH TO WATER DETERMINATION

On February 15, 2023, a borehole (BH01) was advanced to a depth of 110 feet below ground surface (bgs) via air rotary drill rig. The borehole was located approximately 0.25 miles southeast 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 B. 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 hydrated bentonite chips.

DEFERRAL REQUEST

Remediation and delineation activities at the Site were summarized in the *Deferral Request* submitted to the NMOCD on November 21, 2022. Due to shallow subsurface active pipelines within the remediation area, COP requested a deferral for the remaining impacted soil.

COP is requesting a deferral of final remediation due to the presence of active production equipment and subsurface pipelines in the areas that require additional remediation. COP safety policy restricts soil disturbing activities to within a 2-foot radius of any on-site production equipment or active pipelines. This safety policy is established to protect workers and reduce the likelihood of compromising the foundation of the production equipment or pipelines. The remaining impacted soil is limited to an area directly above active pipelines and deepening the excavation in these areas to remove the remaining impacted soil would poses a risk to human health and the environment if one of these pipelines was damaged. The impacted soil remaining in place is delineated laterally by soil samples SS06 through SS09 and vertically by soil samples SS10 and SS10A. Ensolum estimates a maximum of 100 cubic yards of total petroleum hydrocarbon (TPH) and chloride impacted soil remain in place above the active pipelines assuming a maximum 3-foot depth of impact. COP intends to apply Micro-Blaze® to promote biodegradation of the hydrocarbon impacts within the release area.

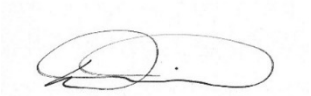
COP does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 100 feet bgs and the release remained on the active well pad.

Based on the presence of active pipelines within the release area and active production equipment in the immediate vicinity of the release area, COP requests deferral of final remediation for Incident Number NAPP2215827276 until final reclamation of the well pad or major construction, whichever comes first.

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



Daniel R. Moir, PG
Senior Managing Geologist

cc: Jacob Laird, ConocoPhillips Company
Bureau of Land Management

Attachments:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Deferral Area
Table 1	Soil Sample Analytical Results
Appendix A	Final C-141
Appendix B	Referenced Well Records
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports
Appendix E	NMOCD Notifications

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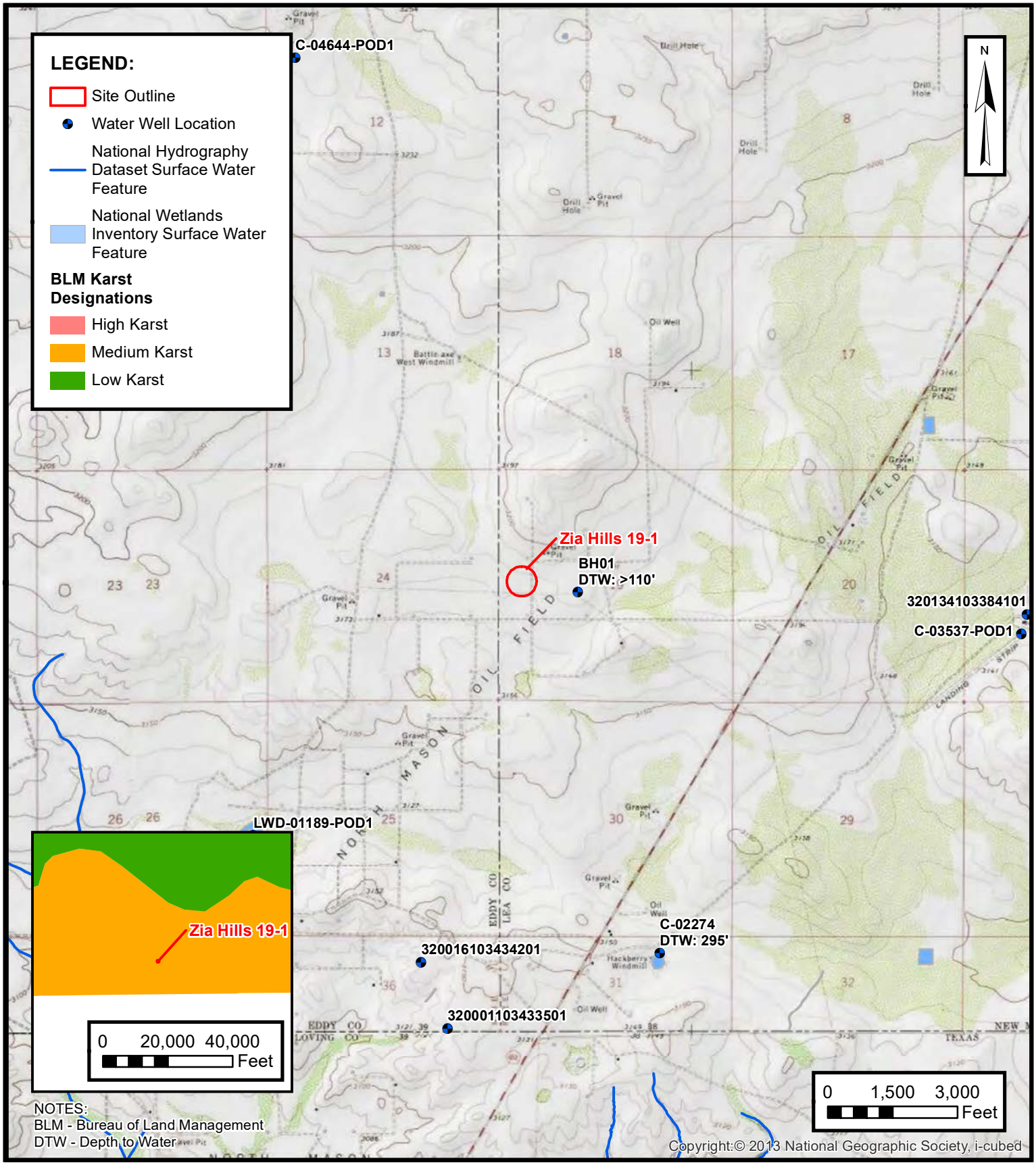
FIGURES



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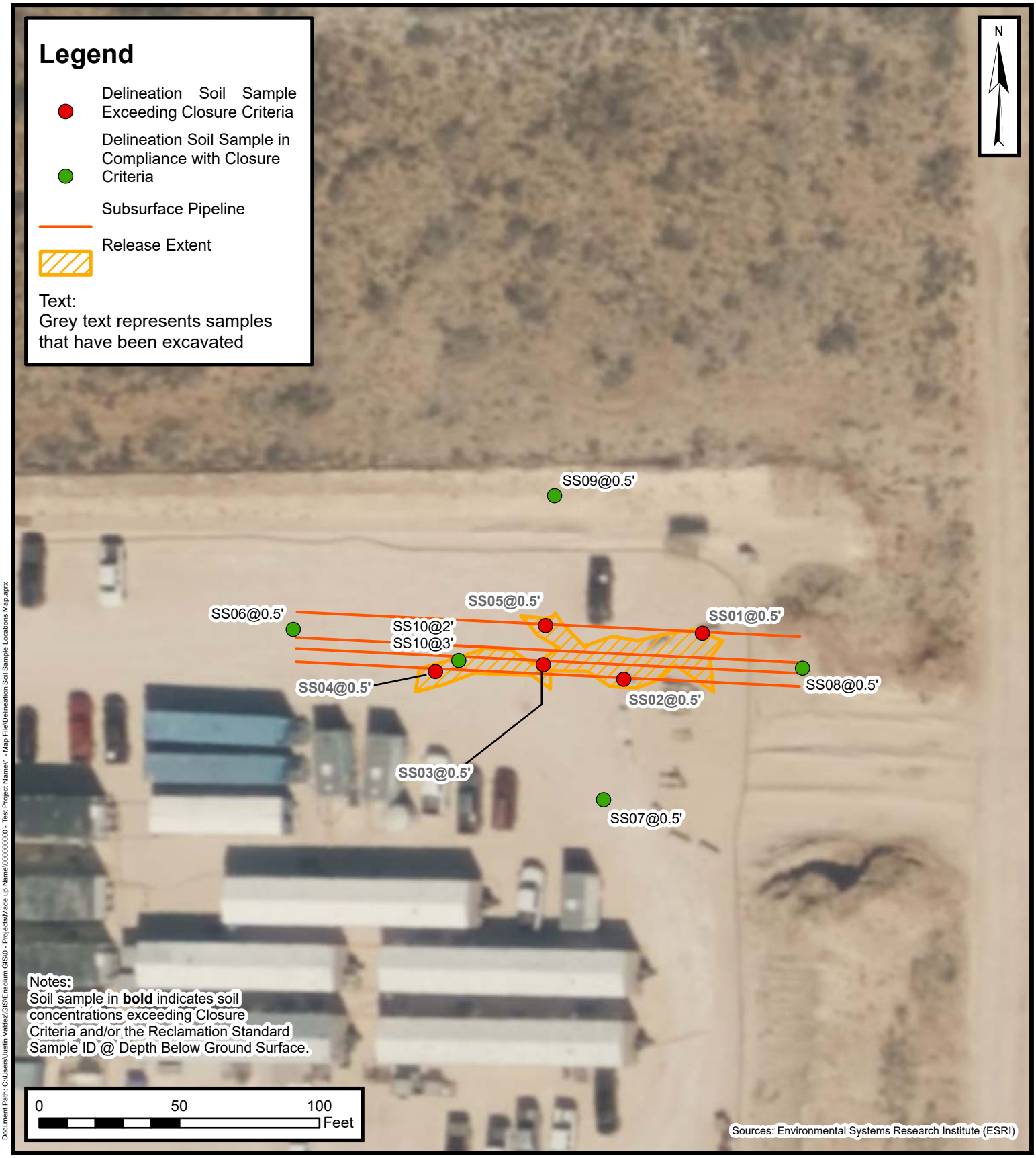
Environmental, Engineering and Hydrogeologic Consultants

SITE RECEPTOR MAP

ConocoPhillips Company
ZIA HILLS 19-1
Incident Number NAPP2215827276
Unit E Sec 19 T26S R32E
Lea County, New Mexico

FIGURE
1



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\0 - Projects\Made up Name\000000000 - Test Project Name\1 - Map File\Delineation Soil Sample Locations Map.aprx

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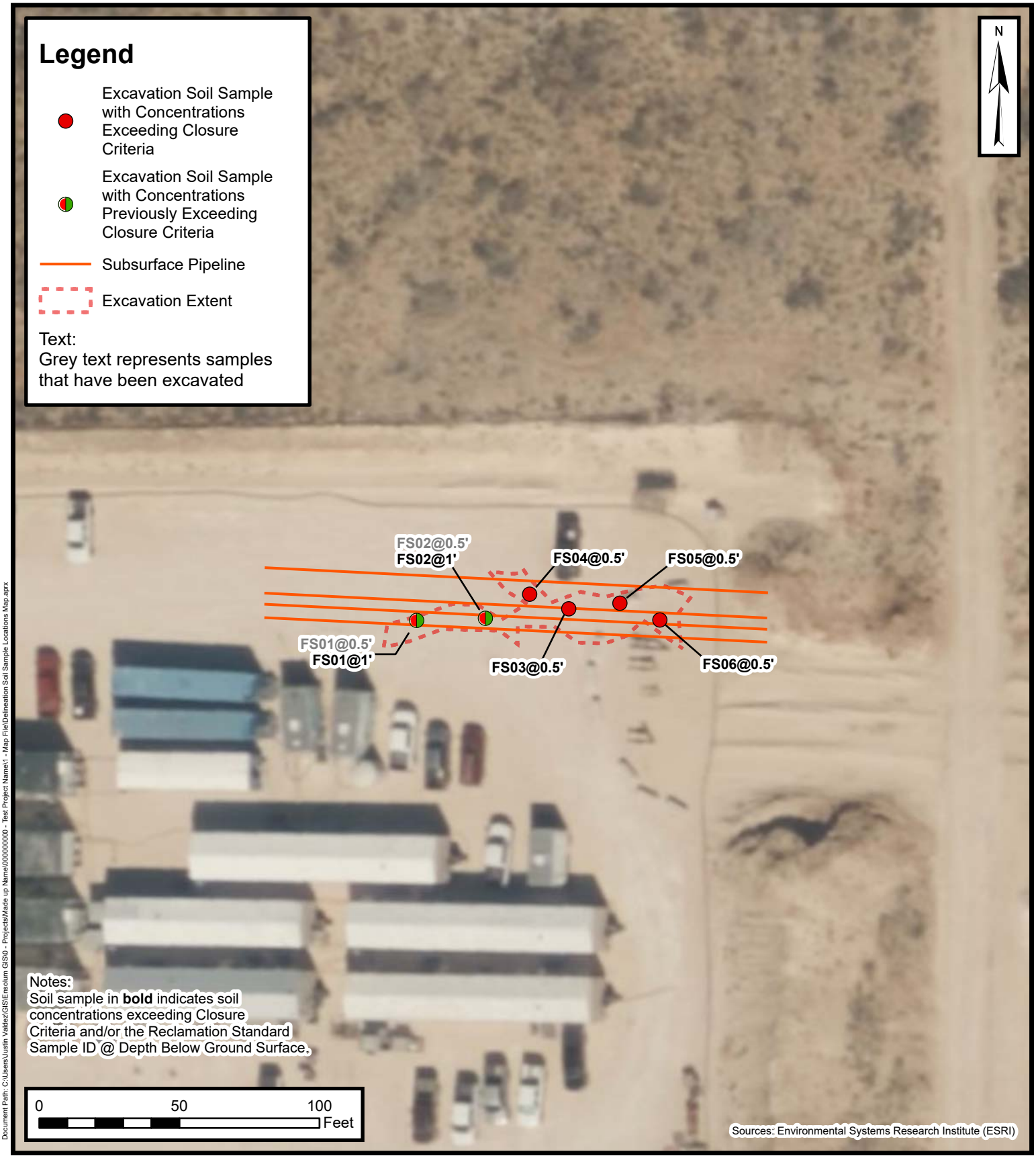
Delineation Soil Sample Locations

ConocoPhillips Company
Zia Hills 19-1
NAPP2215827276
Unit E Sec 19 T26S R32E
Lea County, New Mexico

FIGURE
2



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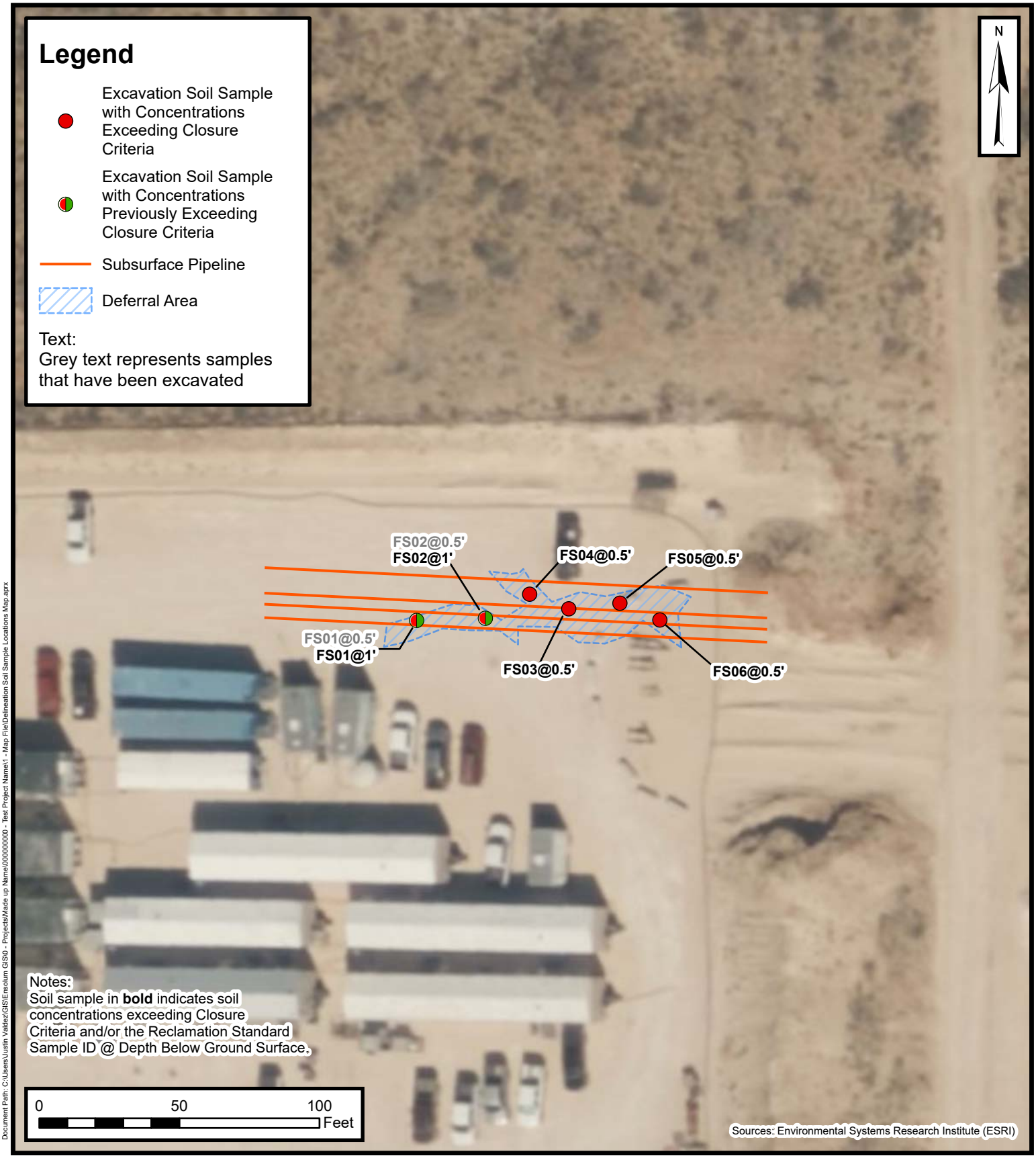
Excavation Soil Sample Locations

ConocoPhillips Company
Zia Hills 19-1
NAPP2215827276
Unit E Sec 19 T26S R32E
Lea County, New Mexico

FIGURE
3



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\0 - Projects\Made up Name\000000000 - Test Project Name\1 - Map File\Delineation Soil Sample Locations Map.aprx

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Deferral Area

ConocoPhillips Company
Zia Hills 19-1
NAPP2215827276
Unit E Sec 19 T26S R32E
Lea County, New Mexico

FIGURE
4

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Zia Hills 19-1
ConocoPhillips Company
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Preliminary Assessment Soil Samples										
SS01	5/31/2022	0.5	0.942	**50.0**	3,610	17,100	3,250	**20,710**	**24,000**	581
SS02	5/31/2022	0.5	1.54	**274**	4,450	12,900	2,300	**17,350**	**19,700**	604
SS03	5/31/2022	0.5	0.0125	0.303	8,890	22,900	4,340	**31,790**	**36,100**	912
SS04	5/31/2022	0.5	5.65	**436**	10,100	24,400	4,550	**34,500**	**39,100**	1,410
SS05	5/31/2022	0.5	4.67	**317**	6,260	19,700	<499	**25,960**	**26,000**	603
Delineation Soil Samples										
SS06	5/31/2022	0.5	0.00684	0.196	<50.0	<50.0	<50.0	<50.0	<50.0	374
SS07	5/31/2022	0.5	<0.00200	0.00871	<50.0	<50.0	<50.0	<50.0	<50.0	491
SS08	5/31/2022	0.5	<0.00199	0.143	<50.0	<50.0	<50.0	<50.0	<50.0	321
SS09	5/31/2022	0.5	<0.00199	0.0684	<49.9	<49.9	<49.9	<49.9	<49.9	371
SS10	11/1/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	987
SS10A	11/1/2022	3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	75.2
Excavation Soil Samples										
FS01	07/14/2022	0.5	<0.200	0.849	78.6	3,790	336	**3,869**	**4,200**	265
FS01A	09/14/2022	1	<0.00200	0.525	157	624	102	781	883	209
FS02	07/14/2022	0.5	<0.0399	1.01	<49.9	2,750	298	**2,750**	**3,050**	919
FS02A	09/14/2022	1	<0.00201	0.747	140	722	119	862	981	203
FS03	07/18/2022	0.5	<0.0994	14.5	407	5,440	490	**5,847**	**6,340**	344
FS04	07/18/2022	0.5	<0.0996	26.6	531	2,990	259	**3,521**	**3,780**	32.3
FS05	07/18/2022	0.5	<0.100	19.9	619	6,620	535	**7,239**	**7,770**	145
FS06	07/18/2022	0.5	<0.101	5.43	122	4,170	354	**4,292**	**4,650**	89.4

Notes:

bgs: below ground surface
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
DRO: Diesel Range Organics
GRO: Gasoline Range Organics
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
NE: not established
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

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	NAPP2215827276
District RP	
Facility ID	fAPP2129428702
Application ID	

Release Notification

Responsible Party

Responsible Party	ConocoPhillips Company	OGRID	217817
Contact Name	Charles Beauvais	Contact Telephone	(575) 988-2043
Contact email	Charles.R.Beauvais@ConocoPhillips.com	Incident # *(assigned by OCD)*	NAPP2215827276
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.02853 Longitude -103.72126

(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Zia Hills 19-1	Site Type	Tank Battery
Date Release Discovered	May 23, 2022	API# *(if applicable)*	

Unit Letter	Section	Township	Range	County
E	19	26S	32E	Lea

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 18	Volume Recovered (bbls) 18
☒ Produced Water	Volume Released (bbls) 26	Volume Recovered (bbls) 25
	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 leak in a flow line due to corrosion.
The release was on the pad.
Evaluation will be made at the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2215827276
District RP	
Facility ID	fAPP2129428702
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? This release was greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Immediate notification was made by Charles Beauvais via email on May 23, 2022 at 4:14 pm to blm_nm_cfo_spill@blm.gov and ocd.enviro@state.nm.us.

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: 6/7/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 06/07/2022

Released to Imaging: 6/21/2023 2:22:52 PM
Received by OCD: 4/24/2023 11:36:26 AM

L48 Spill Volume Estimate Form

Received by OCD: 6/7/2022 7:37:29 AM

Facility Name & Number:	Zia Hills 19-1 B - 105
Asset Area:	DBE
Release Discovery Date & Time:	5/25/2022
Release Type:	Oil Mixture
Provide any known details about the event:	(32.0285320, -103.7212761) - Lat Lon

NAPP2215827276

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)	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.)
Rectangle A	12.0	6.0	66.00	4	72.000	1.375	17.622	0.069	18.834		0.000	18.834
Rectangle B	16.0	6.0	66.00	4	96.000	1.375	23.496	0.069	25.111		0.000	25.111
Rectangle C					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle J					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
								Total Volume Release:	43.945		0.000	43.945

Released to Imaging: 6/7/2022 8:19:17 AM

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 114298
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	6/7/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2215827276
District RP	
Facility ID	fAPP2129428702
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	NAPP2215827276
District RP	
Facility ID	fAPP2129428702
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _Jacob Laird_____ Title: _Environmental Engineer___

Signature: Jacob Laird Date: ____4/21/2023

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2215827276
District RP	
Facility ID	fAPP2129428702
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: __Jacob Laird_____ Title: __Environmental Engineer_____

Signature: Jacob Laird Date: _____4/21/2023_____

email: __Jacob.Laird@ConocoPhillips.com_____ Telephone: __575-703-5482_____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Nelson Velez Date: 06/21/2023

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APPENDIX B

Referenced Well Records

ENSOLUM

	Sample Name: BH01	Date: 02/15/2023
	Site Name: Zia Hills 19-1	
	Incident Number: NAPP2215827276	
	Job Number: 03D2024049	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: J. Falcomata	Method: Air Rotary
Coordinates: 32.027844, -103.717185	Hole Diameter: 6"	Total Depth: 110'

Comments: Soil boring was advanced to a total depth of 110' bgs. No water was observed within the soil boring after at least 72 hours. On 11/14/2022 the soil boring was plugged and abandoned using hydrated bentonite chips.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	-	-	N	-	-	10	GW	WELL GRADED GRAVEL W/ SAND: very coarse to coarse to medium grained, tan to light brown, no odor.
D	-	-	N	-	-	20	SM	SILTY SAND W/ GRAVEL: very fine to fine to medium grained, tan to slightly reddish brown, no odor.
D	-	-	N	-	-	30	SM	SILTY SAND: very fine to fine grained, tan to light brown, no odor.
M	-	-	N	-	-	40	SM	SILTY SAND: very fine to fine grained, tan to light brown, slightly damp, no odor.
M	-	-	N	-	-	50	SM	SILTY SAND: very fine to fine grained, tan to light brown, slightly damp, no odor.
D	-	-	N	-	-	60	SM	SILTY SAND: very fine to fine grained, tan to very light brown, dry, no odor.
M	-	-	N	-	-	70	SM	SILTY SAND: very fine to fine grained, light brown to medium brown, dry, no odor.
M	-	-	N	-	-	80	SP-SC	POORLY GRADED SAND W/ CLAY: very fine grained, medium to dark brown, slightly damp, no odor.
M	-	-	N	-	-	90	SC	CLAYEY SAND: very fine grained, medium brown, damp, no odor.
M	-	-	N	-	-	100	SC	CLAYEY SAND: very fine grained, medium brown, damp, no odor.
M	-	-	N	-	-	110	SC	CLAYEY SAND: very fine grained, medium brown, damp, no odor.

Total Depth @ 110 feet bgs

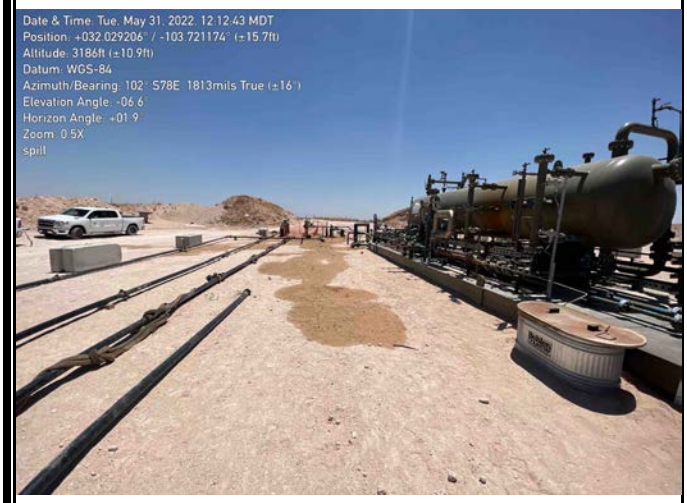
ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
ConocoPhillips Company
Zia Hills 19-1
Incident Number NAPP2215827276

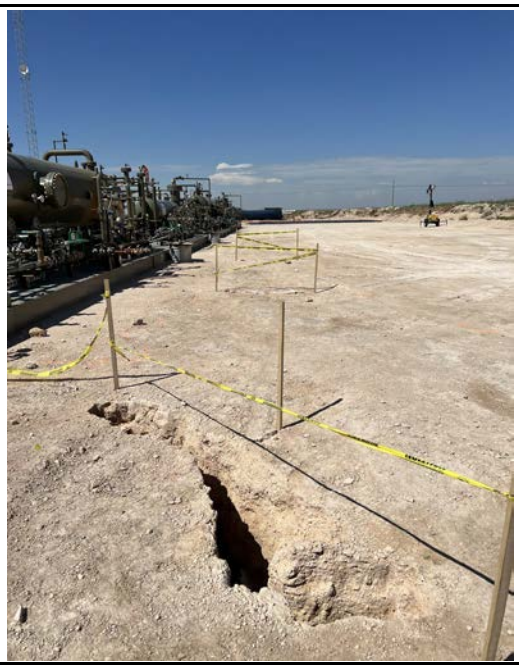


Photograph 1 Date: 5/31/2022

Description: View of the release area prior to remediation, looking east

Photograph 2 Date: 9/14/2022

Description: View of the release area after excavation activities, looking east



Photograph 3 Date: 9/14/2022

Description: View of the daylighting activities of subsurface piplines

Photograph 4 Date: 7/19/2022

Description: View of the release area after excavation activities

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2367-1
Laboratory Sample Delivery Group: 03D2024049
Client Project/Site: Zia Hills 19-1

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
6/6/2022 11:49:06 AM

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

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

Client: Ensolum
Project/Site: Zia Hills 19-1

Laboratory Job ID: 890-2367-1
SDG: 03D2024049

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

Job ID: 890-2367-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2367-1

Receipt
The samples were received on 6/2/2022 11:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-26827 and analytical batch 880-26785 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-26795 and 880-26795 and analytical batch 880-26859 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

Client Sample ID: SS06

Lab Sample ID: 890-2367-1
Matrix: Solid
Date Collected: 05/31/22 12:30
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00684**		0.00200		mg/Kg		06/03/22 14:04	06/04/22 04:16	1
Toluene	**0.0634**		0.00200		mg/Kg		06/03/22 14:04	06/04/22 04:16	1
Ethylbenzene	**0.00786**		0.00200		mg/Kg		06/03/22 14:04	06/04/22 04:16	1
m-Xylene & p-Xylene	**0.0996**		0.00401		mg/Kg		06/03/22 14:04	06/04/22 04:16	1
o-Xylene	**0.0181**		0.00200		mg/Kg		06/03/22 14:04	06/04/22 04:16	1
Xylenes, Total	**0.118**		0.00401		mg/Kg		06/03/22 14:04	06/04/22 04:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*06/03/22 14:04*	*06/04/22 04:16*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*06/03/22 14:04*	*06/04/22 04:16*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.196**		0.00401		mg/Kg			06/06/22 12:13	1

Method: 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			06/06/22 09:13	1

Method: 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		06/03/22 08:31	06/03/22 16:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/03/22 08:31	06/03/22 16:33	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/03/22 08:31	06/03/22 16:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*06/03/22 08:31*	*06/03/22 16:33*	*1*
o-Terphenyl	*108*		*70 - 130*	*06/03/22 08:31*	*06/03/22 16:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**374**		25.0		mg/Kg			06/04/22 18:41	5

Client Sample ID: SS07

Lab Sample ID: 890-2367-2
Matrix: Solid
Date Collected: 05/31/22 12:35
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/03/22 14:04	06/04/22 04:36	1
Toluene	**0.00254**		0.00200		mg/Kg		06/03/22 14:04	06/04/22 04:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/03/22 14:04	06/04/22 04:36	1
m-Xylene & p-Xylene	**0.00617**		0.00399		mg/Kg		06/03/22 14:04	06/04/22 04:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/03/22 14:04	06/04/22 04:36	1
Xylenes, Total	**0.00617**		0.00399		mg/Kg		06/03/22 14:04	06/04/22 04:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/03/22 14:04*	*06/04/22 04:36*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

Client Sample ID: SS07

Date Collected: 05/31/22 12:35
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Lab Sample ID: 890-2367-2
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*06/03/22 14:04*	*06/04/22 04:36*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00871**		0.00399		mg/Kg			06/06/22 12:13	1

Method: 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			06/06/22 09:13	1

Method: 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		06/03/22 08:31	06/03/22 17:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/03/22 08:31	06/03/22 17:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/03/22 08:31	06/03/22 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*113*		*70 - 130*	*06/03/22 08:31*	*06/03/22 17:16*	*1*
o-Terphenyl	*117*		*70 - 130*	*06/03/22 08:31*	*06/03/22 17:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**491**		4.96		mg/Kg			06/04/22 18:48	1

Client Sample ID: SS08

Date Collected: 05/31/22 12:40
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Lab Sample ID: 890-2367-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/03/22 14:04	06/04/22 04:57	1
Toluene	**0.0201**		0.00199		mg/Kg		06/03/22 14:04	06/04/22 04:57	1
Ethylbenzene	**0.00631**		0.00199		mg/Kg		06/03/22 14:04	06/04/22 04:57	1
m-Xylene & p-Xylene	**0.0947**		0.00398		mg/Kg		06/03/22 14:04	06/04/22 04:57	1
o-Xylene	**0.0220**		0.00199		mg/Kg		06/03/22 14:04	06/04/22 04:57	1
Xylenes, Total	**0.117**		0.00398		mg/Kg		06/03/22 14:04	06/04/22 04:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*06/03/22 14:04*	*06/04/22 04:57*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*06/03/22 14:04*	*06/04/22 04:57*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.143**		0.00398		mg/Kg			06/06/22 12:13	1

Method: 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			06/06/22 09:13	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

Client Sample ID: SS08

Lab Sample ID: 890-2367-3
Matrix: Solid
Date Collected: 05/31/22 12:40
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Method: 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		06/03/22 08:31	06/03/22 17:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/03/22 08:31	06/03/22 17:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/03/22 08:31	06/03/22 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*06/03/22 08:31*	*06/03/22 17:38*	*1*
o-Terphenyl	*107*		*70 - 130*	*06/03/22 08:31*	*06/03/22 17:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**321**	**F1**	4.95		mg/Kg			06/04/22 18:54	1

Client Sample ID: SS09

Lab Sample ID: 890-2367-4
Matrix: Solid
Date Collected: 05/31/22 12:45
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/03/22 14:04	06/04/22 05:17	1
Toluene	**0.00589**		0.00199		mg/Kg		06/03/22 14:04	06/04/22 05:17	1
Ethylbenzene	**0.00311**		0.00199		mg/Kg		06/03/22 14:04	06/04/22 05:17	1
m-Xylene & p-Xylene	**0.0475**		0.00398		mg/Kg		06/03/22 14:04	06/04/22 05:17	1
o-Xylene	**0.0119**		0.00199		mg/Kg		06/03/22 14:04	06/04/22 05:17	1
Xylenes, Total	**0.0594**		0.00398		mg/Kg		06/03/22 14:04	06/04/22 05:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*06/03/22 14:04*	*06/04/22 05:17*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*06/03/22 14:04*	*06/04/22 05:17*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0684**		0.00398		mg/Kg			06/06/22 12:13	1

Method: 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			06/06/22 09:13	1

Method: 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		06/03/22 08:31	06/03/22 17:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/03/22 08:31	06/03/22 17:59	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/03/22 08:31	06/03/22 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*06/03/22 08:31*	*06/03/22 17:59*	*1*
o-Terphenyl	*113*		*70 - 130*	*06/03/22 08:31*	*06/03/22 17:59*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

Client Sample ID: SS09
Date Collected: 05/31/22 12:45
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Lab Sample ID: 890-2367-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	371		25.3		mg/Kg			06/04/22 19:13	5

Surrogate Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2365-A-3-D MS	Matrix Spike	104	100
890-2365-A-3-E MSD	Matrix Spike Duplicate	102	101
890-2367-1	SS06	101	97
890-2367-2	SS07	102	100
890-2367-3	SS08	105	100
890-2367-4	SS09	109	101
LCS 880-26827/1-A	Lab Control Sample	101	102
LCSD 880-26827/2-A	Lab Control Sample Dup	102	104
MB 880-26788/5-A	Method Blank	94	91
MB 880-26827/5-A	Method Blank	93	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-15426-A-10-B MS	Matrix Spike	100	93
880-15426-A-10-C MSD	Matrix Spike Duplicate	107	97
890-2367-1	SS06	105	108
890-2367-2	SS07	113	117
890-2367-3	SS08	105	107
890-2367-4	SS09	111	113
LCS 880-26772/2-A	Lab Control Sample	128	119
LCSD 880-26772/3-A	Lab Control Sample Dup	113	107
MB 880-26772/1-A	Method Blank	100	112

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-26788/5-A
Matrix: Solid
Analysis Batch: 26785

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26788

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/03/22 09:28	06/03/22 11:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/03/22 09:28	06/03/22 11:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/03/22 09:28	06/03/22 11:47	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/03/22 09:28	06/03/22 11:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/03/22 09:28	06/03/22 11:47	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/03/22 09:28	06/03/22 11:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*06/03/22 09:28*	*06/03/22 11:47*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*06/03/22 09:28*	*06/03/22 11:47*	*1*

Lab Sample ID: MB 880-26827/5-A
Matrix: Solid
Analysis Batch: 26785

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26827

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/03/22 14:04	06/03/22 22:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/03/22 14:04	06/03/22 22:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/03/22 14:04	06/03/22 22:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/03/22 14:04	06/03/22 22:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/03/22 14:04	06/03/22 22:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/03/22 14:04	06/03/22 22:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*06/03/22 14:04*	*06/03/22 22:24*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*06/03/22 14:04*	*06/03/22 22:24*	*1*

Lab Sample ID: LCS 880-26827/1-A
Matrix: Solid
Analysis Batch: 26785

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26827

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09216		mg/Kg		92	70 - 130		
Toluene			0.100	0.08828		mg/Kg		88	70 - 130		
Ethylbenzene			0.100	0.09094		mg/Kg		91	70 - 130		
m-Xylene & p-Xylene			0.200	0.1744		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.09416		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-26827/2-A
Matrix: Solid
Analysis Batch: 26785

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26827

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09492		mg/Kg		95	70 - 130	3	35

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

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

Lab Sample ID: LCSD 880-26827/2-A
Matrix: Solid
Analysis Batch: 26785

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26827

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08896		mg/Kg		89	70 - 130	1	35
Ethylbenzene			0.100	0.09117		mg/Kg		91	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.1757		mg/Kg		88	70 - 130	1	35
o-Xylene			0.100	0.09401		mg/Kg		94	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-2365-A-3-D MS
Matrix: Solid
Analysis Batch: 26785

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26827

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F1 F2	0.100	0.04998	F1	mg/Kg		49	70 - 130
Toluene	0.0122	F1 F2	0.100	0.05019	F1	mg/Kg		38	70 - 130
Ethylbenzene	<0.00200	U F1 F2	0.100	0.04600	F1	mg/Kg		44	70 - 130
m-Xylene & p-Xylene	0.0111	F1	0.200	0.09790	F1	mg/Kg		43	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.05326	F1	mg/Kg		52	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-2365-A-3-E MSD
Matrix: Solid
Analysis Batch: 26785

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26827

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1 F2	0.0996	0.07616	F2	mg/Kg		76	70 - 130	42	35
Toluene	0.0122	F1 F2	0.0996	0.07257	F1 F2	mg/Kg		61	70 - 130	36	35
Ethylbenzene	<0.00200	U F1 F2	0.0996	0.06858	F1 F2	mg/Kg		67	70 - 130	39	35
m-Xylene & p-Xylene	0.0111	F1	0.199	0.1365	F1	mg/Kg		63	70 - 130	33	35
o-Xylene	<0.00200	U F1	0.0996	0.06710	F1	mg/Kg		66	70 - 130	23	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

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

Lab Sample ID: MB 880-26772/1-A
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26772

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		06/03/22 08:31	06/03/22 11:07	1

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

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

Lab Sample ID: MB 880-26772/1-A
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26772

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		06/03/22 08:31	06/03/22 11:07	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/03/22 08:31	06/03/22 11:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*06/03/22 08:31*	*06/03/22 11:07*	*1*
o-Terphenyl	*112*		*70 - 130*	*06/03/22 08:31*	*06/03/22 11:07*	*1*

Lab Sample ID: LCS 880-26772/2-A
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26772

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1083		mg/Kg		108	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1155		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*128*		*70 - 130*
o-Terphenyl	*119*		*70 - 130*

Lab Sample ID: LCSD 880-26772/3-A
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26772

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	891.9		mg/Kg		89	70 - 130	19	20
Diesel Range Organics (Over C10-C28)			1000	1035		mg/Kg		103	70 - 130	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*113*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: 880-15426-A-10-B MS
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26772

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	997	956.7		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	896.8		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

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

Lab Sample ID: 880-15426-A-10-C MSD
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26772

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	1000	1057		mg/Kg		104	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	941.0		mg/Kg		94	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-26795/1-A
Matrix: Solid
Analysis Batch: 26859

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			06/04/22 17:07	1

Lab Sample ID: LCS 880-26795/2-A
Matrix: Solid
Analysis Batch: 26859

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	250.0		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-26795/3-A
Matrix: Solid
Analysis Batch: 26859

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	254.3		mg/Kg		102	90 - 110	2	20

Lab Sample ID: 890-2367-3 MS
Matrix: Solid
Analysis Batch: 26859

Client Sample ID: SS08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	321	F1	248	536.4	F1	mg/Kg		87	90 - 110		

Lab Sample ID: 890-2367-3 MSD
Matrix: Solid
Analysis Batch: 26859

Client Sample ID: SS08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	321	F1	248	538.5	F1	mg/Kg		88	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

GC VOA

Analysis Batch: 26785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2367-1	SS06	Total/NA	Solid	8021B	26827
890-2367-2	SS07	Total/NA	Solid	8021B	26827
890-2367-3	SS08	Total/NA	Solid	8021B	26827
890-2367-4	SS09	Total/NA	Solid	8021B	26827
MB 880-26788/5-A	Method Blank	Total/NA	Solid	8021B	26788
MB 880-26827/5-A	Method Blank	Total/NA	Solid	8021B	26827
LCS 880-26827/1-A	Lab Control Sample	Total/NA	Solid	8021B	26827
LCSD 880-26827/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	26827
890-2365-A-3-D MS	Matrix Spike	Total/NA	Solid	8021B	26827
890-2365-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	26827

Prep Batch: 26788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-26788/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 26827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2367-1	SS06	Total/NA	Solid	5035	
890-2367-2	SS07	Total/NA	Solid	5035	
890-2367-3	SS08	Total/NA	Solid	5035	
890-2367-4	SS09	Total/NA	Solid	5035	
MB 880-26827/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-26827/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-26827/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2365-A-3-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2365-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 26921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2367-1	SS06	Total/NA	Solid	Total BTEX	
890-2367-2	SS07	Total/NA	Solid	Total BTEX	
890-2367-3	SS08	Total/NA	Solid	Total BTEX	
890-2367-4	SS09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 26772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2367-1	SS06	Total/NA	Solid	8015NM Prep	
890-2367-2	SS07	Total/NA	Solid	8015NM Prep	
890-2367-3	SS08	Total/NA	Solid	8015NM Prep	
890-2367-4	SS09	Total/NA	Solid	8015NM Prep	
MB 880-26772/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-26772/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-26772/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-15426-A-10-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-15426-A-10-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 26776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2367-1	SS06	Total/NA	Solid	8015B NM	26772

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

GC Semi VOA (Continued)

Analysis Batch: 26776 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2367-2	SS07	Total/NA	Solid	8015B NM	26772
890-2367-3	SS08	Total/NA	Solid	8015B NM	26772
890-2367-4	SS09	Total/NA	Solid	8015B NM	26772
MB 880-26772/1-A	Method Blank	Total/NA	Solid	8015B NM	26772
LCS 880-26772/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	26772
LCSD 880-26772/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	26772
880-15426-A-10-B MS	Matrix Spike	Total/NA	Solid	8015B NM	26772
880-15426-A-10-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	26772

Analysis Batch: 26882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2367-1	SS06	Total/NA	Solid	8015 NM	
890-2367-2	SS07	Total/NA	Solid	8015 NM	
890-2367-3	SS08	Total/NA	Solid	8015 NM	
890-2367-4	SS09	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 26795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2367-1	SS06	Soluble	Solid	DI Leach	
890-2367-2	SS07	Soluble	Solid	DI Leach	
890-2367-3	SS08	Soluble	Solid	DI Leach	
890-2367-4	SS09	Soluble	Solid	DI Leach	
MB 880-26795/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-26795/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-26795/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2367-3 MS	SS08	Soluble	Solid	DI Leach	
890-2367-3 MSD	SS08	Soluble	Solid	DI Leach	

Analysis Batch: 26859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2367-1	SS06	Soluble	Solid	300.0	26795
890-2367-2	SS07	Soluble	Solid	300.0	26795
890-2367-3	SS08	Soluble	Solid	300.0	26795
890-2367-4	SS09	Soluble	Solid	300.0	26795
MB 880-26795/1-A	Method Blank	Soluble	Solid	300.0	26795
LCS 880-26795/2-A	Lab Control Sample	Soluble	Solid	300.0	26795
LCSD 880-26795/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	26795
890-2367-3 MS	SS08	Soluble	Solid	300.0	26795
890-2367-3 MSD	SS08	Soluble	Solid	300.0	26795

Lab Chronicle

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

Client Sample ID: SS06

Lab Sample ID: 890-2367-1
Matrix: Solid
Date Collected: 05/31/22 12:30
Date Received: 06/02/22 11:30

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	26827	06/03/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1	0 mL	1.0 mL	26785	06/04/22 04:16	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26921	06/06/22 12:13	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26882	06/06/22 09:13	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	26772	06/03/22 08:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26776	06/03/22 16:33	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	26795	06/03/22 09:55	CH	XEN MID
Soluble	Analysis	300.0		5			26859	06/04/22 18:41	CH	XEN MID

Client Sample ID: SS07

Lab Sample ID: 890-2367-2
Matrix: Solid
Date Collected: 05/31/22 12:35
Date Received: 06/02/22 11:30

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	26827	06/03/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1	0 mL	1.0 mL	26785	06/04/22 04:36	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26921	06/06/22 12:13	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26882	06/06/22 09:13	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	26772	06/03/22 08:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26776	06/03/22 17:16	SM	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	26795	06/03/22 09:55	CH	XEN MID
Soluble	Analysis	300.0		1			26859	06/04/22 18:48	CH	XEN MID

Client Sample ID: SS08

Lab Sample ID: 890-2367-3
Matrix: Solid
Date Collected: 05/31/22 12:40
Date Received: 06/02/22 11:30

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	26827	06/03/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1	0 mL	1.0 mL	26785	06/04/22 04:57	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26921	06/06/22 12:13	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26882	06/06/22 09:13	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	26772	06/03/22 08:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26776	06/03/22 17:38	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	26795	06/03/22 09:55	CH	XEN MID
Soluble	Analysis	300.0		1			26859	06/04/22 18:54	CH	XEN MID

Client Sample ID: SS09

Lab Sample ID: 890-2367-4
Matrix: Solid
Date Collected: 05/31/22 12:45
Date Received: 06/02/22 11:30

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	26827	06/03/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1	0 mL	1.0 mL	26785	06/04/22 05:17	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26921	06/06/22 12:13	SM	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

Client Sample ID: SS09

Date Collected: 05/31/22 12:45
Date Received: 06/02/22 11:30

Lab Sample ID: 890-2367-4

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			26882	06/06/22 09:13	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	26772	06/03/22 08:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26776	06/03/22 17:59	SM	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	26795	06/03/22 09:55	CH	XEN MID
Soluble	Analysis	300.0		5			26859	06/04/22 19:13	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

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	T104704400-21-22	06-30-22

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: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2367-1
SDG: 03D2024049

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2367-1	SS06	Solid	05/31/22 12:30	06/02/22 11:30	0.5'
890-2367-2	SS07	Solid	05/31/22 12:35	06/02/22 11:30	0.5'
890-2367-3	SS08	Solid	05/31/22 12:40	06/02/22 11:30	0.5'
890-2367-4	SS09	Solid	05/31/22 12:45	06/02/22 11:30	0.5'

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Chain of Custody

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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:	Kalei Jennings	Bill to: (if different)	Kalei Jennigns
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817-683-2503	Email:	kjennings@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☒ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Zia Hills 19-1	Turn Around	
Project Number:	03D2024049	☑ Routine ☐ Rush	
Project Location:	Lea County	Due Date:	5 Day TAT
Sampler's Name:	Gilbert Moreno	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:	IR-8
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.2
Total Containers:		Corrected Temperature:	1.0

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021	Sample Comments
SS06	S	05.31.22	12:30	0.5'	Grab/	1		X	X	X	
SS07	S	05.31.22	12:35	0.5'	Grab/	1		X	X	X	
SS08	S	05.31.22	12:40	0.5'	Grab/	1		X	X	X	
SS09	S	05.31.22	12:45	0.5'	Grab/	1		X	X	X	

890-2367 Chain of Custody

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		6.2.22 1132	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

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Received by OCD: 4/24/2023 11:36:26 AM

Released to Imaging: 6/21/2023 2:22:52 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 890-776 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-2367-1
Address: 1211 W Florida Ave	Due Date Requested: 6/8/2022			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Zia Hills 19-1	Project #: 89000094			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note
			Preservation Code:										
SS06 (890-2367-1)	5/31/22	12 30 Mountain		Solid			X	X	X	X	X	1	
SS07 (890-2367-2)	5/31/22	12 35 Mountain		Solid			X	X	X	X	X	1	
SS08 (890-2367-3)	5/31/22	12 40 Mountain		Solid			X	X	X	X	X	1	
SS09 (890-2367-4)	5/31/22	12 45 Mountain		Solid			X	X	X	X	X	1	

Preservation Codes

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

Other:

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

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

Ver 06/08/2021

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6/6/2022
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Released to Imaging: 6/21/2023 2:22:52 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2367-1
SDG Number: 03D2024049

Login Number: 2367
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2367-1
SDG Number: 03D2024049

Login Number: 2367
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 06/03/22 11:41 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2369-1
Laboratory Sample Delivery Group: 03D2024049
Client Project/Site: Zia Hills 19-1

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
6/8/2022 3:28:03 PM

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

LINKS
Review your project results through my EOL
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

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

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

Client: Ensolum
Project/Site: Zia Hills 19-1

Laboratory Job ID: 890-2369-1
SDG: 03D2024049

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2369-1
Project/Site: Zia Hills 19-1 SDG: 03D2024049

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
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
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

Job ID: 890-2369-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2369-1

Receipt
The samples were received on 6/2/2022 11:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS01 (890-2369-1), SS02 (890-2369-2), SS04 (890-2369-4) and SS05 (890-2369-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS02 (890-2369-2), SS04 (890-2369-4) and SS05 (890-2369-5). 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: SS03 (890-2369-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-26930 and analytical batch 880-26972 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-26930 and analytical batch 880-26972 was outside control limits. Sample non-homogeneity is suspected.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-27007 and analytical batch 880-26972 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-2369-1), SS02 (890-2369-2), SS03 (890-2369-3) and SS04 (890-2369-4). 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: SS05 (890-2369-5). 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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-26795 and 880-26795 and analytical batch 880-26859 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

Client Sample ID: SS01

Lab Sample ID: 890-2369-1

Date Collected: 05/31/22 12:00
Matrix: Solid
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.942		0.0998		mg/Kg		06/03/22 15:09	06/05/22 22:05	50
Toluene	8.45		0.992		mg/Kg		06/07/22 08:57	06/07/22 21:13	500
Ethylbenzene	12.3		0.0998		mg/Kg		06/03/22 15:09	06/05/22 22:05	50
m-Xylene & p-Xylene	22.3		1.98		mg/Kg		06/07/22 08:57	06/07/22 21:13	500
o-Xylene	5.96		0.992		mg/Kg		06/07/22 08:57	06/07/22 21:13	500
Xylenes, Total	28.3		1.98		mg/Kg		06/07/22 08:57	06/07/22 21:13	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*481*	*S1+*	*70 - 130*	*06/03/22 15:09*	*06/05/22 22:05*	*50*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*06/03/22 15:09*	*06/05/22 22:05*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	50.0		1.98		mg/Kg			06/08/22 12:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	24000		249		mg/Kg			06/06/22 09:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	3610		249		mg/Kg		06/03/22 08:31	06/04/22 08:16	5
Diesel Range Organics (Over C10-C28)	17100		249		mg/Kg		06/03/22 08:31	06/04/22 08:16	5
Oil Range Organics (Over C28-C36)	3250		249		mg/Kg		06/03/22 08:31	06/04/22 08:16	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*187*	*S1+*	*70 - 130*	*06/03/22 08:31*	*06/04/22 08:16*	*5*
o-Terphenyl	*125*		*70 - 130*	*06/03/22 08:31*	*06/04/22 08:16*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	581		24.9		mg/Kg			06/04/22 22:26	5

Client Sample ID: SS02

Lab Sample ID: 890-2369-2

Date Collected: 05/31/22 12:05
Matrix: Solid
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.54		0.100		mg/Kg		06/03/22 15:09	06/05/22 22:26	50
Toluene	40.6		1.00		mg/Kg		06/06/22 15:00	06/07/22 18:33	500
Ethylbenzene	28.4		1.00		mg/Kg		06/06/22 15:00	06/07/22 18:33	500
m-Xylene & p-Xylene	166		2.00		mg/Kg		06/06/22 15:00	06/07/22 18:33	500
o-Xylene	37.9		1.00		mg/Kg		06/06/22 15:00	06/07/22 18:33	500
Xylenes, Total	204		2.00		mg/Kg		06/06/22 15:00	06/07/22 18:33	500

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

Client Sample ID: SS02

Date Collected: 05/31/22 12:05
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Lab Sample ID: 890-2369-2
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*06/03/22 15:09*	*06/05/22 22:26*	*50*
1,4-Difluorobenzene (Surr)	*38*	*S1-*	*70 - 130*	*06/03/22 15:09*	*06/05/22 22:26*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**274**		2.00		mg/Kg			06/08/22 12:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**19700**		250		mg/Kg			06/06/22 09:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**4450**		250		mg/Kg		06/03/22 08:31	06/04/22 08:37	5
Diesel Range Organics (Over C10-C28)	**12900**		250		mg/Kg		06/03/22 08:31	06/04/22 08:37	5
Oil Range Organics (Over C28-C36)	**2300**		250		mg/Kg		06/03/22 08:31	06/04/22 08:37	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*188*	*S1+*	*70 - 130*	*06/03/22 08:31*	*06/04/22 08:37*	*5*
o-Terphenyl	*112*		*70 - 130*	*06/03/22 08:31*	*06/04/22 08:37*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**604**		24.8		mg/Kg			06/04/22 19:32	5

Client Sample ID: SS03

Date Collected: 05/31/22 12:10
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Lab Sample ID: 890-2369-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0125**		0.00199		mg/Kg		06/07/22 11:40	06/08/22 01:22	1
Toluene	**0.0902**		0.00199		mg/Kg		06/07/22 11:40	06/08/22 01:22	1
Ethylbenzene	**0.0287**		0.00199		mg/Kg		06/07/22 11:40	06/08/22 01:22	1
m-Xylene & p-Xylene	**0.139**		0.00398		mg/Kg		06/07/22 11:40	06/08/22 01:22	1
o-Xylene	**0.0329**		0.00199		mg/Kg		06/07/22 11:40	06/08/22 01:22	1
Xylenes, Total	**0.172**		0.00398		mg/Kg		06/07/22 11:40	06/08/22 01:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*	*06/07/22 11:40*	*06/08/22 01:22*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*06/07/22 11:40*	*06/08/22 01:22*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.303**		0.00398		mg/Kg			06/08/22 12:08	1

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

Client Sample ID: SS03

Date Collected: 05/31/22 12:10
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Lab Sample ID: 890-2369-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	36100		500		mg/Kg			06/06/22 09:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	8890		500		mg/Kg		06/03/22 08:31	06/04/22 08:58	10
Diesel Range Organics (Over C10-C28)	22900		500		mg/Kg		06/03/22 08:31	06/04/22 08:58	10
Oil Range Organics (Over C28-C36)	4340		500		mg/Kg		06/03/22 08:31	06/04/22 08:58	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*229*	*S1+*	*70 - 130*	*06/03/22 08:31*	*06/04/22 08:58*	*10*
o-Terphenyl	*120*		*70 - 130*	*06/03/22 08:31*	*06/04/22 08:58*	*10*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	912		49.9		mg/Kg			06/04/22 19:38	10

Client Sample ID: SS04

Date Collected: 05/31/22 12:15
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Lab Sample ID: 890-2369-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.65		0.101		mg/Kg		06/03/22 15:09	06/05/22 22:46	50
Toluene	3.22		0.101		mg/Kg		06/03/22 15:09	06/05/22 22:46	50
Ethylbenzene	56.5		1.00		mg/Kg		06/06/22 15:00	06/07/22 18:54	500
m-Xylene & p-Xylene	369		2.00		mg/Kg		06/06/22 15:00	06/07/22 18:54	500
o-Xylene	1.47		0.101		mg/Kg		06/03/22 15:09	06/05/22 22:46	50
Xylenes, Total	453		2.00		mg/Kg		06/06/22 15:00	06/07/22 18:54	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*241*	*S1+*	*70 - 130*	*06/03/22 15:09*	*06/05/22 22:46*	*50*
1,4-Difluorobenzene (Surr)	*48*	*S1-*	*70 - 130*	*06/03/22 15:09*	*06/05/22 22:46*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	436		2.00		mg/Kg			06/08/22 12:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	39100		499		mg/Kg			06/06/22 09:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	10100		499		mg/Kg		06/03/22 08:31	06/04/22 09:19	10
Diesel Range Organics (Over C10-C28)	24400		499		mg/Kg		06/03/22 08:31	06/04/22 09:19	10

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

Client Sample ID: SS04

Lab Sample ID: 890-2369-4
Matrix: Solid
Date Collected: 05/31/22 12:15
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	4550		499		mg/Kg		06/03/22 08:31	06/04/22 09:19	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*256*	*S1+*	*70 - 130*	*06/03/22 08:31*	*06/04/22 09:19*	*10*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*06/03/22 08:31*	*06/04/22 09:19*	*10*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1410		49.5		mg/Kg			06/04/22 19:44	10

Client Sample ID: SS05

Lab Sample ID: 890-2369-5
Matrix: Solid
Date Collected: 05/31/22 12:20
Date Received: 06/02/22 11:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.67		0.101		mg/Kg		06/03/22 15:09	06/05/22 23:07	50
Toluene	9.91		0.101		mg/Kg		06/03/22 15:09	06/05/22 23:07	50
Ethylbenzene	42.6		0.990		mg/Kg		06/06/22 15:00	06/07/22 19:14	500
m-Xylene & p-Xylene	256		1.98		mg/Kg		06/06/22 15:00	06/07/22 19:14	500
o-Xylene	4.07		0.101		mg/Kg		06/03/22 15:09	06/05/22 23:07	50
Xylenes, Total	313		1.98		mg/Kg		06/06/22 15:00	06/07/22 19:14	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*350*	*S1+*	*70 - 130*	*06/03/22 15:09*	*06/05/22 23:07*	*50*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*06/03/22 15:09*	*06/05/22 23:07*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	317		1.98		mg/Kg			06/08/22 12:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	26000		499		mg/Kg			06/06/22 09:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	6260		499		mg/Kg		06/03/22 08:31	06/04/22 08:16	10
Diesel Range Organics (Over C10-C28)	19700		499		mg/Kg		06/03/22 08:31	06/04/22 08:16	10
Oll Range Organics (Over C28-C36)	<499	U	499		mg/Kg		06/03/22 08:31	06/04/22 08:16	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*212*	*S1+*	*70 - 130*	*06/03/22 08:31*	*06/04/22 08:16*	*10*
o-Terphenyl	*130*		*70 - 130*	*06/03/22 08:31*	*06/04/22 08:16*	*10*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	603		24.8		mg/Kg			06/04/22 19:50	5

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Surrogate Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-15447-A-7-D MS	Matrix Spike	100	101
880-15447-A-7-E MSD	Matrix Spike Duplicate	99	102
880-15516-A-1-B MS	Matrix Spike	107	105
880-15516-A-1-C MSD	Matrix Spike Duplicate	102	101
880-15523-A-1-F MS	Matrix Spike	105	89
880-15523-A-1-G MSD	Matrix Spike Duplicate	107	91
890-2368-A-41-B MS	Matrix Spike	97	100
890-2368-A-41-C MSD	Matrix Spike Duplicate	96	99
890-2369-1	SS01	481 S1+	101
890-2369-2	SS02	123	38 S1-
890-2369-3	SS03	138 S1+	118
890-2369-4	SS04	241 S1+	48 S1-
890-2369-5	SS05	350 S1+	81
LCS 880-26838/1-A	Lab Control Sample	98	99
LCS 880-26930/1-A	Lab Control Sample	104	103
LCS 880-26988/1-A	Lab Control Sample	103	98
LCS 880-27007/1-A	Lab Control Sample	101	104
LCSD 880-26838/2-A	Lab Control Sample Dup	107	98
LCSD 880-26930/2-A	Lab Control Sample Dup	104	105
LCSD 880-26988/2-A	Lab Control Sample Dup	104	102
LCSD 880-27007/2-A	Lab Control Sample Dup	101	101
MB 880-26837/5-A	Method Blank	101	91
MB 880-26838/5-A	Method Blank	99	91
MB 880-26930/5-A	Method Blank	97	91
MB 880-26988/5-A	Method Blank	98	100
MB 880-27007/5-A	Method Blank	103	90

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)
880-15426-A-10-B MS	Matrix Spike	100	93
880-15426-A-10-C MSD	Matrix Spike Duplicate	107	97
890-2369-1	SS01	187 S1+	125
890-2369-2	SS02	188 S1+	112
890-2369-3	SS03	229 S1+	120
890-2369-4	SS04	256 S1+	131 S1+
890-2369-5	SS05	212 S1+	130
LCS 880-26772/2-A	Lab Control Sample	128	119
LCSD 880-26772/3-A	Lab Control Sample Dup	113	107
MB 880-26772/1-A	Method Blank	100	112

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-26837/5-A
Matrix: Solid
Analysis Batch: 26862

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26837

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/03/22 15:03	06/05/22 09:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/03/22 15:03	06/05/22 09:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/03/22 15:03	06/05/22 09:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/03/22 15:03	06/05/22 09:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/03/22 15:03	06/05/22 09:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/03/22 15:03	06/05/22 09:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*06/03/22 15:03*	*06/05/22 09:25*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*06/03/22 15:03*	*06/05/22 09:25*	*1*

Lab Sample ID: MB 880-26838/5-A
Matrix: Solid
Analysis Batch: 26862

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26838

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/03/22 15:09	06/05/22 20:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/03/22 15:09	06/05/22 20:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/03/22 15:09	06/05/22 20:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/03/22 15:09	06/05/22 20:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/03/22 15:09	06/05/22 20:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/03/22 15:09	06/05/22 20:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*06/03/22 15:09*	*06/05/22 20:01*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*06/03/22 15:09*	*06/05/22 20:01*	*1*

Lab Sample ID: LCS 880-26838/1-A
Matrix: Solid
Analysis Batch: 26862

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26838

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09399		mg/Kg		94	70 - 130		
Toluene			0.100	0.08843		mg/Kg		88	70 - 130		
Ethylbenzene			0.100	0.08833		mg/Kg		88	70 - 130		
m-Xylene & p-Xylene			0.200	0.1766		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.08950		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-26838/2-A
Matrix: Solid
Analysis Batch: 26862

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26838

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09481		mg/Kg		95	70 - 130	1	35

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

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

Lab Sample ID: LCSD 880-26838/2-A
Matrix: Solid
Analysis Batch: 26862

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26838

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09202		mg/Kg		92	70 - 130	4	35
Ethylbenzene			0.100	0.09525		mg/Kg		95	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1940		mg/Kg		97	70 - 130	9	35
o-Xylene			0.100	0.09899		mg/Kg		99	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 890-2368-A-41-B MS
Matrix: Solid
Analysis Batch: 26862

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26838

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.101	0.09396		mg/Kg		93	70 - 130
Toluene	<0.00199	U	0.101	0.08728		mg/Kg		86	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.08332		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1651		mg/Kg		82	70 - 130
o-Xylene	<0.00199	U	0.101	0.08302		mg/Kg		82	70 - 130

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

Lab Sample ID: 890-2368-A-41-C MSD
Matrix: Solid
Analysis Batch: 26862

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26838

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.101	0.09484		mg/Kg		94	70 - 130	1	35
Toluene	<0.00199	U	0.101	0.08783		mg/Kg		87	70 - 130	1	35
Ethylbenzene	<0.00199	U	0.101	0.08438		mg/Kg		84	70 - 130	1	35
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1657		mg/Kg		82	70 - 130	0	35
o-Xylene	<0.00199	U	0.101	0.08336		mg/Kg		83	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 880-26930/5-A
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26930

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/06/22 15:00	06/07/22 11:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/06/22 15:00	06/07/22 11:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/06/22 15:00	06/07/22 11:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/06/22 15:00	06/07/22 11:19	1

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

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

Lab Sample ID: MB 880-26930/5-A
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26930

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/06/22 15:00	06/07/22 11:19	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/06/22 15:00	06/07/22 11:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*06/06/22 15:00*	*06/07/22 11:19*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*06/06/22 15:00*	*06/07/22 11:19*	*1*

Lab Sample ID: LCS 880-26930/1-A
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26930

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1066		mg/Kg		107	70 - 130		
Toluene			0.100	0.1011		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.1048		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2115		mg/Kg		106	70 - 130		
o-Xylene			0.100	0.1058		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-26930/2-A
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26930

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09666		mg/Kg		97	70 - 130	10	35
Toluene			0.100	0.08547		mg/Kg		85	70 - 130	17	35
Ethylbenzene			0.100	0.07996		mg/Kg		80	70 - 130	27	35
m-Xylene & p-Xylene			0.200	0.1600		mg/Kg		80	70 - 130	28	35
o-Xylene			0.100	0.07965		mg/Kg		80	70 - 130	28	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-15447-A-7-D MS
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26930

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0996	0.08096		mg/Kg		81	70 - 130		
Toluene	<0.00199	U	0.0996	0.07038		mg/Kg		71	70 - 130		
Ethylbenzene	<0.00199	U F2 F1	0.0996	0.06491	F1	mg/Kg		65	70 - 130		
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.199	0.1299	F1	mg/Kg		65	70 - 130		
o-Xylene	<0.00199	U F2 F1	0.0996	0.06511	F1	mg/Kg		65	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

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

Lab Sample ID: 880-15447-A-7-D MS
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26930

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

Lab Sample ID: 880-15447-A-7-E MSD
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26930

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.101	0.1021		mg/Kg		101	70 - 130	23	35
Toluene	<0.00199	U	0.101	0.09554		mg/Kg		95	70 - 130	30	35
Ethylbenzene	<0.00199	U F2 F1	0.101	0.09559	F2	mg/Kg		95	70 - 130	38	35
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.201	0.1909	F2	mg/Kg		95	70 - 130	38	35
o-Xylene	<0.00199	U F2 F1	0.101	0.09548	F2	mg/Kg		95	70 - 130	38	35

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

Lab Sample ID: MB 880-26988/5-A
Matrix: Solid
Analysis Batch: 26971

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26988

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/07/22 08:57	06/07/22 12:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/07/22 08:57	06/07/22 12:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/07/22 08:57	06/07/22 12:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/07/22 08:57	06/07/22 12:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/07/22 08:57	06/07/22 12:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/07/22 08:57	06/07/22 12:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	06/07/22 08:57	06/07/22 12:43	1
1,4-Difluorobenzene (Surr)	100		70 - 130	06/07/22 08:57	06/07/22 12:43	1

Lab Sample ID: LCS 880-26988/1-A
Matrix: Solid
Analysis Batch: 26971

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26988

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08600		mg/Kg		86	70 - 130		
Toluene			0.100	0.09176		mg/Kg		92	70 - 130		
Ethylbenzene			0.100	0.08718		mg/Kg		87	70 - 130		
m-Xylene & p-Xylene			0.200	0.2004		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09933		mg/Kg		99	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

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

Lab Sample ID: LCS 880-26988/1-A
Matrix: Solid
Analysis Batch: 26971

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26988

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

Lab Sample ID: LCSD 880-26988/2-A
Matrix: Solid
Analysis Batch: 26971

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26988

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1017		mg/Kg		102	70 - 130	17	35
Toluene			0.100	0.1016		mg/Kg		102	70 - 130	10	35
Ethylbenzene			0.100	0.09480		mg/Kg		95	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.2151		mg/Kg		108	70 - 130	7	35
o-Xylene			0.100	0.1062		mg/Kg		106	70 - 130	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-15516-A-1-B MS
Matrix: Solid
Analysis Batch: 26971

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26988

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.101	0.1028		mg/Kg		102	70 - 130		
Toluene	<0.00199	U	0.101	0.09960		mg/Kg		99	70 - 130		
Ethylbenzene	<0.00199	U	0.101	0.09110		mg/Kg		91	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.201	0.2068		mg/Kg		103	70 - 130		
o-Xylene	<0.00199	U	0.101	0.1010		mg/Kg		100	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-15516-A-1-C MSD
Matrix: Solid
Analysis Batch: 26971

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26988

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.09110		mg/Kg		91	70 - 130	12	35
Toluene	<0.00199	U	0.100	0.08982		mg/Kg		90	70 - 130	10	35
Ethylbenzene	<0.00199	U	0.100	0.08215		mg/Kg		82	70 - 130	10	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1860		mg/Kg		93	70 - 130	11	35
o-Xylene	<0.00199	U	0.100	0.09081		mg/Kg		91	70 - 130	11	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

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

Lab Sample ID: MB 880-27007/5-A
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 27007

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/07/22 11:40	06/07/22 21:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/07/22 11:40	06/07/22 21:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/07/22 11:40	06/07/22 21:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/07/22 11:40	06/07/22 21:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/07/22 11:40	06/07/22 21:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/07/22 11:40	06/07/22 21:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*06/07/22 11:40*	*06/07/22 21:56*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*06/07/22 11:40*	*06/07/22 21:56*	*1*

Lab Sample ID: LCS 880-27007/1-A
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 27007

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1001		mg/Kg		100	70 - 130		
Toluene			0.100	0.09532		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09610		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene			0.200	0.1925		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09868		mg/Kg		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-27007/2-A
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 27007

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08068		mg/Kg		81	70 - 130	21	35
Toluene			0.100	0.07724		mg/Kg		77	70 - 130	21	35
Ethylbenzene			0.100	0.07992		mg/Kg		80	70 - 130	18	35
m-Xylene & p-Xylene			0.200	0.1613		mg/Kg		81	70 - 130	18	35
o-Xylene			0.100	0.08325		mg/Kg		83	70 - 130	17	35

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

Lab Sample ID: 880-15523-A-1-F MS
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 27007

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U F1	0.100	0.03500	F1	mg/Kg		35	70 - 130		
Toluene	<0.00199	U F1	0.100	0.03846	F1	mg/Kg		38	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

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

Lab Sample ID: 880-15523-A-1-F MS
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 27007

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F1	0.100	0.04263	F1	mg/Kg		43	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.08879	F1	mg/Kg		44	70 - 130
o-Xylene	<0.00199	U F1	0.100	0.04822	F1	mg/Kg		48	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-15523-A-1-G MSD
Matrix: Solid
Analysis Batch: 26972

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 27007

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.0998	0.04180	F1	mg/Kg		42	70 - 130	18	35
Toluene	<0.00199	U F1	0.0998	0.04471	F1	mg/Kg		45	70 - 130	15	35
Ethylbenzene	<0.00199	U F1	0.0998	0.04699	F1	mg/Kg		47	70 - 130	10	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.09732	F1	mg/Kg		49	70 - 130	9	35
o-Xylene	<0.00199	U F1	0.0998	0.05097	F1	mg/Kg		51	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

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

Lab Sample ID: MB 880-26772/1-A
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26772

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		06/03/22 08:31	06/03/22 11:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/03/22 08:31	06/03/22 11:07	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/03/22 08:31	06/03/22 11:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*06/03/22 08:31*	*06/03/22 11:07*	*1*
o-Terphenyl	*112*		*70 - 130*	*06/03/22 08:31*	*06/03/22 11:07*	*1*

Lab Sample ID: LCS 880-26772/2-A
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26772

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1083		mg/Kg		108	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1155		mg/Kg		115	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

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

Lab Sample ID: LCS 880-26772/2-A
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26772

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	128		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: LCSD 880-26772/3-A
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26772

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	891.9		mg/Kg		89	70 - 130	19	20
Diesel Range Organics (Over C10-C28)			1000	1035		mg/Kg		103	70 - 130	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: 880-15426-A-10-B MS
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26772

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	997	956.7		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	896.8		mg/Kg		90	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: 880-15426-A-10-C MSD
Matrix: Solid
Analysis Batch: 26776

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26772

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	1000	1057		mg/Kg		104	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	941.0		mg/Kg		94	70 - 130	5	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	97		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-26795/1-A
Matrix: Solid
Analysis Batch: 26859

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			06/04/22 17:07	1

Lab Sample ID: LCS 880-26795/2-A
Matrix: Solid
Analysis Batch: 26859

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	250.0		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-26795/3-A
Matrix: Solid
Analysis Batch: 26859

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	254.3		mg/Kg		102	90 - 110	2	20

Lab Sample ID: 890-2367-A-3-B MS
Matrix: Solid
Analysis Batch: 26859

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	321	F1	248	536.4	F1	mg/Kg		87	90 - 110		

Lab Sample ID: 890-2367-A-3-C MSD
Matrix: Solid
Analysis Batch: 26859

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	321	F1	248	538.5	F1	mg/Kg		88	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

GC VOA

Prep Batch: 26837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-26837/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 26838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-1	SS01	Total/NA	Solid	5035	
890-2369-2	SS02	Total/NA	Solid	5035	
890-2369-4	SS04	Total/NA	Solid	5035	
890-2369-5	SS05	Total/NA	Solid	5035	
MB 880-26838/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-26838/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-26838/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2368-A-41-B MS	Matrix Spike	Total/NA	Solid	5035	
890-2368-A-41-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 26862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-1	SS01	Total/NA	Solid	8021B	26838
890-2369-2	SS02	Total/NA	Solid	8021B	26838
890-2369-4	SS04	Total/NA	Solid	8021B	26838
890-2369-5	SS05	Total/NA	Solid	8021B	26838
MB 880-26837/5-A	Method Blank	Total/NA	Solid	8021B	26837
MB 880-26838/5-A	Method Blank	Total/NA	Solid	8021B	26838
LCS 880-26838/1-A	Lab Control Sample	Total/NA	Solid	8021B	26838
LCSD 880-26838/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	26838
890-2368-A-41-B MS	Matrix Spike	Total/NA	Solid	8021B	26838
890-2368-A-41-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	26838

Prep Batch: 26930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-2	SS02	Total/NA	Solid	5035	
890-2369-4	SS04	Total/NA	Solid	5035	
890-2369-5	SS05	Total/NA	Solid	5035	
MB 880-26930/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-26930/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-26930/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-15447-A-7-D MS	Matrix Spike	Total/NA	Solid	5035	
880-15447-A-7-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 26971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-1	SS01	Total/NA	Solid	8021B	26988
MB 880-26988/5-A	Method Blank	Total/NA	Solid	8021B	26988
LCS 880-26988/1-A	Lab Control Sample	Total/NA	Solid	8021B	26988
LCSD 880-26988/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	26988
880-15516-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	26988
880-15516-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	26988

Analysis Batch: 26972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-2	SS02	Total/NA	Solid	8021B	26930
890-2369-3	SS03	Total/NA	Solid	8021B	27007

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

GC VOA (Continued)

Analysis Batch: 26972 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-4	SS04	Total/NA	Solid	8021B	26930
890-2369-5	SS05	Total/NA	Solid	8021B	26930
MB 880-26930/5-A	Method Blank	Total/NA	Solid	8021B	26930
MB 880-27007/5-A	Method Blank	Total/NA	Solid	8021B	27007
LCS 880-26930/1-A	Lab Control Sample	Total/NA	Solid	8021B	26930
LCS 880-27007/1-A	Lab Control Sample	Total/NA	Solid	8021B	27007
LCSD 880-26930/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	26930
LCSD 880-27007/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	27007
880-15447-A-7-D MS	Matrix Spike	Total/NA	Solid	8021B	26930
880-15447-A-7-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	26930
880-15523-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	27007
880-15523-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	27007

Prep Batch: 26988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-1	SS01	Total/NA	Solid	5035	
MB 880-26988/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-26988/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-26988/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-15516-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-15516-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 27007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-3	SS03	Total/NA	Solid	5035	
MB 880-27007/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-27007/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-27007/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-15523-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
880-15523-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 27089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-1	SS01	Total/NA	Solid	Total BTEX	
890-2369-2	SS02	Total/NA	Solid	Total BTEX	
890-2369-3	SS03	Total/NA	Solid	Total BTEX	
890-2369-4	SS04	Total/NA	Solid	Total BTEX	
890-2369-5	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 26772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-1	SS01	Total/NA	Solid	8015NM Prep	
890-2369-2	SS02	Total/NA	Solid	8015NM Prep	
890-2369-3	SS03	Total/NA	Solid	8015NM Prep	
890-2369-4	SS04	Total/NA	Solid	8015NM Prep	
890-2369-5	SS05	Total/NA	Solid	8015NM Prep	
MB 880-26772/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-26772/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-26772/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

GC Semi VOA (Continued)

Prep Batch: 26772 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15426-A-10-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-15426-A-10-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 26776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-1	SS01	Total/NA	Solid	8015B NM	26772
890-2369-2	SS02	Total/NA	Solid	8015B NM	26772
890-2369-3	SS03	Total/NA	Solid	8015B NM	26772
890-2369-4	SS04	Total/NA	Solid	8015B NM	26772
MB 880-26772/1-A	Method Blank	Total/NA	Solid	8015B NM	26772
LCS 880-26772/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	26772
LCSD 880-26772/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	26772
880-15426-A-10-B MS	Matrix Spike	Total/NA	Solid	8015B NM	26772
880-15426-A-10-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	26772

Analysis Batch: 26778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-5	SS05	Total/NA	Solid	8015B NM	26772

Analysis Batch: 26884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-1	SS01	Total/NA	Solid	8015 NM	
890-2369-2	SS02	Total/NA	Solid	8015 NM	
890-2369-3	SS03	Total/NA	Solid	8015 NM	
890-2369-4	SS04	Total/NA	Solid	8015 NM	
890-2369-5	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 26795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-1	SS01	Soluble	Solid	DI Leach	
890-2369-2	SS02	Soluble	Solid	DI Leach	
890-2369-3	SS03	Soluble	Solid	DI Leach	
890-2369-4	SS04	Soluble	Solid	DI Leach	
890-2369-5	SS05	Soluble	Solid	DI Leach	
MB 880-26795/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-26795/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-26795/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2367-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2367-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 26859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2369-1	SS01	Soluble	Solid	300.0	26795
890-2369-2	SS02	Soluble	Solid	300.0	26795
890-2369-3	SS03	Soluble	Solid	300.0	26795
890-2369-4	SS04	Soluble	Solid	300.0	26795
890-2369-5	SS05	Soluble	Solid	300.0	26795
MB 880-26795/1-A	Method Blank	Soluble	Solid	300.0	26795
LCS 880-26795/2-A	Lab Control Sample	Soluble	Solid	300.0	26795

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

HPLC/IC (Continued)

Analysis Batch: 26859 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-26795/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	26795
890-2367-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	26795
890-2367-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	26795

Lab Chronicle

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

Client Sample ID: SS01
Date Collected: 05/31/22 12:00
Date Received: 06/02/22 11:30

Lab Sample ID: 890-2369-1
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			5.04 g	5 mL	26988	06/07/22 08:57	EL	XEN MID
Total/NA	Analysis	8021B		500	5 mL	5 mL	26971	06/07/22 21:13	MR	XEN MID
Total/NA	Prep	5035			5.01 g	5 mL	26838	06/03/22 15:09	EL	XEN MID
Total/NA	Analysis	8021B		50			26862	06/05/22 22:05	SM	XEN MID
Total/NA	Analysis	Total BTEX		1			27089	06/08/22 12:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26884	06/06/22 09:13	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	26772	06/03/22 08:31	DM	XEN MID
Total/NA	Analysis	8015B NM		5			26776	06/04/22 08:16	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	26795	06/03/22 09:55	CH	XEN MID
Soluble	Analysis	300.0		5			26859	06/04/22 22:26	CH	XEN MID

Client Sample ID: SS02
Date Collected: 05/31/22 12:05
Date Received: 06/02/22 11:30

Lab Sample ID: 890-2369-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	26838	06/03/22 15:09	EL	XEN MID
Total/NA	Analysis	8021B		50			26862	06/05/22 22:26	SM	XEN MID
Total/NA	Prep	5035			4.99 g	5 mL	26930	06/06/22 15:00	EL	XEN MID
Total/NA	Analysis	8021B		500			26972	06/07/22 18:33	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27089	06/08/22 12:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26884	06/06/22 09:13	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	26772	06/03/22 08:31	DM	XEN MID
Total/NA	Analysis	8015B NM		5			26776	06/04/22 08:37	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	26795	06/03/22 09:55	CH	XEN MID
Soluble	Analysis	300.0		5			26859	06/04/22 19:32	CH	XEN MID

Client Sample ID: SS03
Date Collected: 05/31/22 12:10
Date Received: 06/02/22 11:30

Lab Sample ID: 890-2369-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	27007	06/07/22 11:40	MR	XEN MID
Total/NA	Analysis	8021B		1	0 mL	1.0 mL	26972	06/08/22 01:22	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27089	06/08/22 12:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26884	06/06/22 09:13	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	26772	06/03/22 08:31	DM	XEN MID
Total/NA	Analysis	8015B NM		10			26776	06/04/22 08:58	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	26795	06/03/22 09:55	CH	XEN MID
Soluble	Analysis	300.0		10			26859	06/04/22 19:38	CH	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

Client Sample ID: SS04

Date Collected: 05/31/22 12:15
Date Received: 06/02/22 11:30

Lab Sample ID: 890-2369-4

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			4.95 g	5 mL	26838	06/03/22 15:09	EL	XEN MID
Total/NA	Analysis	8021B		50			26862	06/05/22 22:46	SM	XEN MID
Total/NA	Prep	5035			5.00 g	5 mL	26930	06/06/22 15:00	EL	XEN MID
Total/NA	Analysis	8021B		500			26972	06/07/22 18:54	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27089	06/08/22 12:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26884	06/06/22 09:13	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	26772	06/03/22 08:31	DM	XEN MID
Total/NA	Analysis	8015B NM		10			26776	06/04/22 09:19	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	26795	06/03/22 09:55	CH	XEN MID
Soluble	Analysis	300.0		10			26859	06/04/22 19:44	CH	XEN MID

Client Sample ID: SS05

Date Collected: 05/31/22 12:20
Date Received: 06/02/22 11:30

Lab Sample ID: 890-2369-5

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			4.96 g	5 mL	26838	06/03/22 15:09	EL	XEN MID
Total/NA	Analysis	8021B		50			26862	06/05/22 23:07	SM	XEN MID
Total/NA	Prep	5035			5.05 g	5 mL	26930	06/06/22 15:00	EL	XEN MID
Total/NA	Analysis	8021B		500			26972	06/07/22 19:14	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27089	06/08/22 12:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26884	06/06/22 09:13	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	26772	06/03/22 08:31	DM	XEN MID
Total/NA	Analysis	8015B NM		10			26778	06/04/22 08:16	SM	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	26795	06/03/22 09:55	CH	XEN MID
Soluble	Analysis	300.0		5			26859	06/04/22 19:50	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

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	T104704400-21-22	06-30-22

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: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2369-1
SDG: 03D2024049

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2369-1	SS01	Solid	05/31/22 12:00	06/02/22 11:30	0.5'
890-2369-2	SS02	Solid	05/31/22 12:05	06/02/22 11:30	0.5'
890-2369-3	SS03	Solid	05/31/22 12:10	06/02/22 11:30	0.5'
890-2369-4	SS04	Solid	05/31/22 12:15	06/02/22 11:30	0.5'
890-2369-5	SS05	Solid	05/31/22 12:20	06/02/22 11:30	0.5'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennigns
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817-683-2503	Email:	kjennings@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☒ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Zia Hills 19-1	Turn Around	
Project Number:	03D2024049	☑ Routine ☐ Rush	
Project Location:	Lea County	Due Date:	5 Day TAT
Sampler's Name:	Gilbert Moreno	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:	TMM-003	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.2	
Total Containers:		Corrected Temperature:	1.0	

ANALYSIS REQUEST

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021	Sample Comments
SS01	S	05.31.22	12:00	0.5'	Grab/	1	X	X	X	
SS02	S	05.31.22	12:05	0.5'	Grab/	1	X	X	X	
SS03	S	05.31.22	12:10	0.5'	Grab/	1	X	X	X	
SS04	S	05.31.22	12:15	0.5'	Grab/	1	X	X	X	
SS05	S	05.31.22	12:20	0.5'	Grab/	1	X	X	X	

890-2369 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010:** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		6.2.22 1130	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020 2

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Received by OCD: 4/24/2023 11:36:26 AM

Released to Imaging: 6/21/2023 2:22:52 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-776 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-2369-1
Address: 1211 W Florida Ave	Due Date Requested: 6/8/2022			
City: Midland	TAT Requested (days)			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #			
Email	WO #			
Project Name: Zia Hills 19-1	Project #: 89000094			
Site	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/6035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note
			Preservation Code:										
SS01 (890-2369-1)	5/31/22	12 00 Mountain		Solid			X	X	X	X	X	1	
SS02 (890-2369-2)	5/31/22	12 05 Mountain		Solid			X	X	X	X	X	1	
SS03 (890-2369-3)	5/31/22	12 10 Mountain		Solid			X	X	X	X	X	1	
SS04 (890-2369-4)	5/31/22	12 15 Mountain		Solid			X	X	X	X	X	1	
SS05 (890-2369-5)	5/31/22	12 20 Mountain		Solid			X	X	X	X	X	1	

Preservation Codes

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

Other:

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

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

Ver: 06/08/2021

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Received by OCD: 4/24/2023 11:36:26 AM
6/8/2022
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Released to Imaging: 6/21/2023 2:22:52 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2369-1
SDG Number: 03D2024049

Login Number: 2369
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2369-1
SDG Number: 03D2024049

Login Number: 2369
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 06/03/22 11:41 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2977-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: Zia Hills 19-1
Revision: 2

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

Attn: Josh Adams

JKramer

Authorized for release by:
10/19/2022 1:15:43 PM

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

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

Client: Ensolum
Project/Site: Zia Hills 19-1

Laboratory Job ID: 890-2977-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
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: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

Job ID: 890-2977-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2977-1

REVISION

The report being provided is a revision of the original report sent on 9/20/2022. The report (revision 2) is being revised due to Per client eamil, requesting sample ID changes.

Report revision history

The report being provided is a revision of the original report sent on 9/20/2022. The report (revision 2) is being revised due to Per client eamil, requesting sample ID changes.
Revision 1 - 9/21/2022 - Reason - Per client email, need project name revised to match COC.

Receipt
The samples were received on 9/15/2022 9:36 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34689 and analytical batch 880-34832 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-34673 and analytical batch 880-34714 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

Client Sample ID: FS01A
Date Collected: 09/14/22 14:30
Date Received: 09/15/22 09:36
Sample Depth: 1

Lab Sample ID: 890-2977-1
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		09/19/22 12:00	09/20/22 00:30	1
Toluene	**0.0151**		0.00200		mg/Kg		09/19/22 12:00	09/20/22 00:30	1
Ethylbenzene	**0.0485**		0.00200		mg/Kg		09/19/22 12:00	09/20/22 00:30	1
m-Xylene & p-Xylene	**0.336**		0.00401		mg/Kg		09/19/22 12:00	09/20/22 00:30	1
o-Xylene	**0.125**		0.00200		mg/Kg		09/19/22 12:00	09/20/22 00:30	1
Xylenes, Total	**0.461**		0.00401		mg/Kg		09/19/22 12:00	09/20/22 00:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*09/19/22 12:00*	*09/20/22 00:30*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*09/19/22 12:00*	*09/20/22 00:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.525**		0.00401		mg/Kg			09/20/22 09:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**883**		50.0		mg/Kg			09/19/22 15:34	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	**157**	***1**	50.0		mg/Kg		09/16/22 11:41	09/18/22 19:07	1
Diesel Range Organics (Over C10-C28)	**624**		50.0		mg/Kg		09/16/22 11:41	09/18/22 19:07	1
Oil Range Organics (Over C28-C36)	**102**		50.0		mg/Kg		09/16/22 11:41	09/18/22 19:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/16/22 11:41*	*09/18/22 19:07*	*1*
o-Terphenyl	*93*		*70 - 130*	*09/16/22 11:41*	*09/18/22 19:07*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**209**		24.8		mg/Kg			09/20/22 00:34	5

Client Sample ID: FS02A
Date Collected: 09/14/22 14:35
Date Received: 09/15/22 09:36
Sample Depth: 1

Lab Sample ID: 890-2977-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/19/22 12:00	09/20/22 00:50	1
Toluene	**0.0183**		0.00201		mg/Kg		09/19/22 12:00	09/20/22 00:50	1
Ethylbenzene	**0.0459**		0.00201		mg/Kg		09/19/22 12:00	09/20/22 00:50	1
m-Xylene & p-Xylene	**0.481**		0.00402		mg/Kg		09/19/22 12:00	09/20/22 00:50	1
o-Xylene	**0.202**		0.00201		mg/Kg		09/19/22 12:00	09/20/22 00:50	1
Xylenes, Total	**0.683**		0.00402		mg/Kg		09/19/22 12:00	09/20/22 00:50	1

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

Client Sample ID: FS02A
Date Collected: 09/14/22 14:35
Date Received: 09/15/22 09:36
Sample Depth: 1

Lab Sample ID: 890-2977-2
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*152*	*S1+*	*70 - 130*	*09/19/22 12:00*	*09/20/22 00:50*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*09/19/22 12:00*	*09/20/22 00:50*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.747**		0.00402	mg/Kg			09/20/22 09:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**981**		50.0	mg/Kg			09/19/22 15:34	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	**140**	***1**	50.0	mg/Kg		09/16/22 11:41	09/18/22 19:28	1
Diesel Range Organics (Over C10-C28)	**722**		50.0	mg/Kg		09/16/22 11:41	09/18/22 19:28	1
Oil Range Organics (Over C28-C36)	**119**		50.0	mg/Kg		09/16/22 11:41	09/18/22 19:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*09/16/22 11:41*	*09/18/22 19:28*	*1*
o-Terphenyl	*98*		*70 - 130*	*09/16/22 11:41*	*09/18/22 19:28*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**203**		25.0	mg/Kg			09/20/22 00:39	5

Surrogate Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)								
890-2977-1	FS01A	106	72								
890-2977-2	FS02A	152 S1+	92								
890-2984-A-1-F MS	Matrix Spike	112	103								
890-2984-A-1-G MSD	Matrix Spike Duplicate	66 S1-	112								
LCS 880-34689/1-A	Lab Control Sample	105	100								
LCSD 880-34689/2-A	Lab Control Sample Dup	102	103								
MB 880-34689/5-B	Method Blank	101	117								

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)								
890-2971-A-1-C MS	Matrix Spike	87	77								
890-2971-A-1-D MSD	Matrix Spike Duplicate	85	77								
890-2977-1	FS01A	93	93								
890-2977-2	FS02A	97	98								
LCS 880-34673/2-A	Lab Control Sample	82	90								
LCSD 880-34673/3-A	Lab Control Sample Dup	86	93								
MB 880-34673/1-A	Method Blank	113	122								

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34689/5-B
Matrix: Solid
Analysis Batch: 34832

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34689

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/16/22 15:45	09/19/22 17:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/16/22 15:45	09/19/22 17:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/16/22 15:45	09/19/22 17:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*09/16/22 15:45*	*09/19/22 17:24*	*1*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*09/16/22 15:45*	*09/19/22 17:24*	*1*

Lab Sample ID: LCS 880-34689/1-A
Matrix: Solid
Analysis Batch: 34832

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34689

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09148		mg/Kg		91	70 - 130		
Toluene			0.100	0.09608		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.09681		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene			0.200	0.2046		mg/Kg		102	70 - 130		
o-Xylene			0.100	0.1027		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-34689/2-A
Matrix: Solid
Analysis Batch: 34832

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34689

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09765		mg/Kg		98	70 - 130	7	35
Toluene			0.100	0.09126		mg/Kg		91	70 - 130	5	35
Ethylbenzene			0.100	0.08993		mg/Kg		90	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.1909		mg/Kg		95	70 - 130	7	35
o-Xylene			0.100	0.09752		mg/Kg		98	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-2984-A-1-F MS
Matrix: Solid
Analysis Batch: 34832

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34689

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F1	0.0998	0.08170		mg/Kg		82	70 - 130		
Toluene	<0.00200	U F2 F1	0.0998	0.07915		mg/Kg		79	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

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

Lab Sample ID: 890-2984-A-1-F MS
Matrix: Solid
Analysis Batch: 34832

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34689

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F2 F1	0.0998	0.07827		mg/Kg		78	70 - 130
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.200	0.1597		mg/Kg		80	70 - 130
o-Xylene	<0.00200	U F2 F1	0.0998	0.08156		mg/Kg		82	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-2984-A-1-G MSD
Matrix: Solid
Analysis Batch: 34832

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34689

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.100	0.06928	F1	mg/Kg		69	70 - 130	16	35
Toluene	<0.00200	U F2 F1	0.100	0.05454	F2 F1	mg/Kg		54	70 - 130	37	35
Ethylbenzene	<0.00200	U F2 F1	0.100	0.05045	F2 F1	mg/Kg		50	70 - 130	43	35
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.201	0.1004	F2 F1	mg/Kg		50	70 - 130	46	35
o-Xylene	<0.00200	U F2 F1	0.100	0.05598	F2 F1	mg/Kg		56	70 - 130	37	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*66*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

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

Lab Sample ID: MB 880-34673/1-A
Matrix: Solid
Analysis Batch: 34714

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34673

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		09/16/22 11:40	09/18/22 10:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/16/22 11:40	09/18/22 10:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/16/22 11:40	09/18/22 10:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*09/16/22 11:40*	*09/18/22 10:36*	*1*
o-Terphenyl	*122*		*70 - 130*	*09/16/22 11:40*	*09/18/22 10:36*	*1*

Lab Sample ID: LCS 880-34673/2-A
Matrix: Solid
Analysis Batch: 34714

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34673

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	700.8		mg/Kg		70	70 - 130
Diesel Range Organics (Over C10-C28)	1000	811.2		mg/Kg		81	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

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

Lab Sample ID: LCS 880-34673/2-A
Matrix: Solid
Analysis Batch: 34714

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34673

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: LCSD 880-34673/3-A
Matrix: Solid
Analysis Batch: 34714

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34673

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	880.9	*1	mg/Kg		88	70 - 130	23	20
Diesel Range Organics (Over C10-C28)			1000	808.4		mg/Kg		81	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: 890-2971-A-1-C MS
Matrix: Solid
Analysis Batch: 34714

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34673

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 *1	996	1095		mg/Kg		110	70 - 130		
Diesel Range Organics (Over C10-C28)	412		996	1146		mg/Kg		74	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	77		70 - 130

Lab Sample ID: 890-2971-A-1-D MSD
Matrix: Solid
Analysis Batch: 34714

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34673

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 *1	999	1040		mg/Kg		104	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	412		999	1155		mg/Kg		74	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	77		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34662/1-A
Matrix: Solid
Analysis Batch: 34856

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			09/19/22 22:33	1

Lab Sample ID: LCS 880-34662/2-A
Matrix: Solid
Analysis Batch: 34856

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	250.7		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-34662/3-A
Matrix: Solid
Analysis Batch: 34856

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	253.0		mg/Kg		101	90 - 110	1	20

Lab Sample ID: 890-2974-A-1-B MS
Matrix: Solid
Analysis Batch: 34856

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	102		251	342.5		mg/Kg		96	90 - 110		

Lab Sample ID: 890-2974-A-1-C MSD
Matrix: Solid
Analysis Batch: 34856

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	102		251	342.1		mg/Kg		96	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

GC VOA

Prep Batch: 34689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2977-1	FS01A	Total/NA	Solid	5035	
890-2977-2	FS02A	Total/NA	Solid	5035	
MB 880-34689/5-B	Method Blank	Total/NA	Solid	5035	
LCS 880-34689/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34689/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2984-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2984-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2977-1	FS01A	Total/NA	Solid	8021B	34689
890-2977-2	FS02A	Total/NA	Solid	8021B	34689
MB 880-34689/5-B	Method Blank	Total/NA	Solid	8021B	34689
LCS 880-34689/1-A	Lab Control Sample	Total/NA	Solid	8021B	34689
LCSD 880-34689/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34689
890-2984-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	34689
890-2984-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34689

Analysis Batch: 34920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2977-1	FS01A	Total/NA	Solid	Total BTEX	
890-2977-2	FS02A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 34673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2977-1	FS01A	Total/NA	Solid	8015NM Prep	
890-2977-2	FS02A	Total/NA	Solid	8015NM Prep	
MB 880-34673/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34673/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34673/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2971-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2971-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2977-1	FS01A	Total/NA	Solid	8015B NM	34673
890-2977-2	FS02A	Total/NA	Solid	8015B NM	34673
MB 880-34673/1-A	Method Blank	Total/NA	Solid	8015B NM	34673
LCS 880-34673/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34673
LCSD 880-34673/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34673
890-2971-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	34673
890-2971-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34673

Analysis Batch: 34865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2977-1	FS01A	Total/NA	Solid	8015 NM	
890-2977-2	FS02A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

HPLC/IC

Leach Batch: 34662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2977-1	FS01A	Soluble	Solid	DI Leach	
890-2977-2	FS02A	Soluble	Solid	DI Leach	
MB 880-34662/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34662/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34662/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2974-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2974-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2977-1	FS01A	Soluble	Solid	300.0	34662
890-2977-2	FS02A	Soluble	Solid	300.0	34662
MB 880-34662/1-A	Method Blank	Soluble	Solid	300.0	34662
LCS 880-34662/2-A	Lab Control Sample	Soluble	Solid	300.0	34662
LCSD 880-34662/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34662
890-2974-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	34662
890-2974-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34662

Lab Chronicle

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

Client Sample ID: FS01A
Date Collected: 09/14/22 14:30
Date Received: 09/15/22 09:36

Lab Sample ID: 890-2977-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	34689	09/19/22 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34832	09/20/22 00:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			34920	09/20/22 09:49	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34865	09/19/22 15:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34673	09/16/22 11:41	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34714	09/18/22 19:07	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34662	09/16/22 10:33	CH	EET MID
Soluble	Analysis	300.0		5			34856	09/20/22 00:34	CH	EET MID

Client Sample ID: FS02A
Date Collected: 09/14/22 14:35
Date Received: 09/15/22 09:36

Lab Sample ID: 890-2977-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	34689	09/19/22 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34832	09/20/22 00:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			34920	09/20/22 09:49	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34865	09/19/22 15:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34673	09/16/22 11:41	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34714	09/18/22 19:28	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34662	09/16/22 10:33	CH	EET MID
Soluble	Analysis	300.0		5			34856	09/20/22 00:39	CH	EET MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

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

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-2977-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2977-1	FS01A	Solid	09/14/22 14:30	09/15/22 09:36	1
890-2977-2	FS02A	Solid	09/14/22 14:35	09/15/22 09:36	1

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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:	Josh Adams	Bill to: (if different)	Josh Adams
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817-683-2503	Email:	jadams@ensolum.com, cshore@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:	Zia Hills 19-1	Turn Around	
Project Number:	03D2024049	☐ Routine ☑ Rush	
Project Location:	Lea County, NM	Due Date:	3 Day
Sampler's Name:	Conner Shore	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	IR#8	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4	
Total Containers:		Corrected Temperature:	1.2	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS01	S	09.14.22	1430	1'	G	1		X	X	X
FS02	S	09.14.22	1435	1'	G	1		X	X	X

Parameters

ANALYSIS REQUEST

890-2977 Chain of Custody

Preservative Codes

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

Sample Comments

CHARGE CODE
A054207SM

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		9-15-22 936	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 4/24/2023 11:36:26 AM

Released to Imaging: 6/21/2023 2:22:52 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2977-1
SDG Number: Lea County NM

Login Number: 2977
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2977-1
SDG Number: Lea County NM

Login Number: 2977
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/16/22 11:00 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

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

Laboratory Job ID: 890-3354-1
Laboratory Sample Delivery Group: Lea County
Client Project/Site: Zia Hills 19-1
Revision: 1

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

Attn: Josh Adams

JKramer

Authorized for release by:
11/4/2022 4:30:09 PM

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

LINKS
Review your project results through my EOL
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

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

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

Client: Ensolum
Project/Site: Zia Hills 19-1

Laboratory Job ID: 890-3354-1
SDG: Lea County

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

Job ID: 890-3354-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3354-1

REVISION

The report being provided is a revision of the original report sent on 11/4/2022. The report (revision 1) is being revised due to Per client email, revising project name..

Report revision history

Receipt
The samples were received on 11/1/2022 2:30 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 23.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS10 (890-3354-1) and SS10A (890-3354-2).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-38611 and analytical batch 880-38578 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS10 (890-3354-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-38587 and analytical batch 880-38572 contained Gasoline Range Organics (GRO)-C6-C10, Diesel Range Organics (Over C10-C28) and OII Range Organics (Over C28-C36) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-38587 and analytical batch 880-38572 was outside control limits. Sample non-homogeneity is suspected.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

Client Sample ID: SS10
Date Collected: 11/01/22 11:30
Date Received: 11/01/22 14:30
Sample Depth: 2'

Lab Sample ID: 890-3354-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/03/22 10:41	11/04/22 03:00	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/03/22 10:41	11/04/22 03:00	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/03/22 10:41	11/04/22 03:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/03/22 10:41	11/04/22 03:00	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/03/22 10:41	11/04/22 03:00	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/03/22 10:41	11/04/22 03:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*11/03/22 10:41*	*11/04/22 03:00*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*11/03/22 10:41*	*11/04/22 03:00*	*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			11/04/22 14:55	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			11/04/22 11:23	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		11/03/22 08:39	11/04/22 02:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/03/22 08:39	11/04/22 02:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/03/22 08:39	11/04/22 02:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*69*	*S1-*	*70 - 130*	*11/03/22 08:39*	*11/04/22 02:41*	*1*
o-Terphenyl	*79*		*70 - 130*	*11/03/22 08:39*	*11/04/22 02:41*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**987**		24.8		mg/Kg			11/04/22 09:52	5

Client Sample ID: SS10A
Date Collected: 11/01/22 13:00
Date Received: 11/01/22 14:30
Sample Depth: 3'

Lab Sample ID: 890-3354-2
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		11/03/22 10:41	11/04/22 03:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/03/22 10:41	11/04/22 03:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/03/22 10:41	11/04/22 03:20	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/03/22 10:41	11/04/22 03:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/03/22 10:41	11/04/22 03:20	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/03/22 10:41	11/04/22 03:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*11/03/22 10:41*	*11/04/22 03:20*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

Client Sample ID: SS10A
Date Collected: 11/01/22 13:00
Date Received: 11/01/22 14:30
Sample Depth: 3'

Lab Sample ID: 890-3354-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*11/03/22 10:41*	*11/04/22 03:20*	*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			11/04/22 14:55	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			11/04/22 11:23	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	<49.9	U	49.9	mg/Kg		11/03/22 08:39	11/04/22 03:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/03/22 08:39	11/04/22 03:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/03/22 08:39	11/04/22 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*11/03/22 08:39*	*11/04/22 03:03*	*1*
o-Terphenyl	*91*		*70 - 130*	*11/03/22 08:39*	*11/04/22 03:03*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75.2**		5.04	mg/Kg			11/04/22 09:57	1

Surrogate Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-21089-A-41-D MS	Matrix Spike	119	95
880-21089-A-41-E MSD	Matrix Spike Duplicate	92	96
890-3354-1	SS10	100	96
890-3354-2	SS10A	126	104
LCS 880-38611/1-A	Lab Control Sample	114	102
LCSD 880-38611/2-A	Lab Control Sample Dup	111	103
MB 880-38429/5-A	Method Blank	90	97
MB 880-38611/5-A	Method Blank	89	96

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)
880-21018-A-1-D MS	Matrix Spike	80	82
880-21018-A-1-E MSD	Matrix Spike Duplicate	80	78
890-3354-1	SS10	69 S1-	79
890-3354-2	SS10A	80	91
LCS 880-38587/2-A	Lab Control Sample	82	96
LCSD 880-38587/3-A	Lab Control Sample Dup	81	92
MB 880-38587/1-A	Method Blank	88	105

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-38429/5-A
Matrix: Solid
Analysis Batch: 38578

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38429

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/22 16:03	11/03/22 13:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/22 16:03	11/03/22 13:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/22 16:03	11/03/22 13:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/01/22 16:03	11/03/22 13:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/22 16:03	11/03/22 13:54	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/01/22 16:03	11/03/22 13:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*11/01/22 16:03*	*11/03/22 13:54*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*11/01/22 16:03*	*11/03/22 13:54*	*1*

Lab Sample ID: MB 880-38611/5-A
Matrix: Solid
Analysis Batch: 38578

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38611

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/03/22 10:41	11/04/22 01:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/03/22 10:41	11/04/22 01:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/03/22 10:41	11/04/22 01:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/03/22 10:41	11/04/22 01:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/03/22 10:41	11/04/22 01:30	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/03/22 10:41	11/04/22 01:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*11/03/22 10:41*	*11/04/22 01:30*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*11/03/22 10:41*	*11/04/22 01:30*	*1*

Lab Sample ID: LCS 880-38611/1-A
Matrix: Solid
Analysis Batch: 38578

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38611

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1057		mg/Kg		106	70 - 130		
Toluene			0.100	0.1157		mg/Kg		116	70 - 130		
Ethylbenzene			0.100	0.1103		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.1961		mg/Kg		98	70 - 130		
o-Xylene			0.100	0.09888		mg/Kg		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-38611/2-A
Matrix: Solid
Analysis Batch: 38578

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38611

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1059		mg/Kg		106	70 - 130	0	35

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

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

Lab Sample ID: LCSD 880-38611/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38578 — **Prep Batch: 38611**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1121		mg/Kg		112	70 - 130	3	35
Ethylbenzene			0.100	0.1065		mg/Kg		107	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1898		mg/Kg		95	70 - 130	3	35
o-Xylene			0.100	0.09559		mg/Kg		96	70 - 130	3	35

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

Lab Sample ID: 880-21089-A-41-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38578 — **Prep Batch: 38611**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F2 F1	0.0998	0.09170		mg/Kg		92	70 - 130
Toluene	<0.00200	U F2 F1	0.0998	0.1044		mg/Kg		105	70 - 130
Ethylbenzene	<0.00200	U F2 F1	0.0998	0.1034		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.200	0.1837		mg/Kg		92	70 - 130
o-Xylene	<0.00200	U F2 F1	0.0998	0.09360		mg/Kg		93	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-21089-A-41-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38578 — **Prep Batch: 38611**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F2 F1	0.0990	0.03180	F2 F1	mg/Kg		32	70 - 130	97	35
Toluene	<0.00200	U F2 F1	0.0990	0.04125	F2 F1	mg/Kg		42	70 - 130	87	35
Ethylbenzene	<0.00200	U F2 F1	0.0990	0.04274	F2 F1	mg/Kg		43	70 - 130	83	35
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.198	0.07074	F2 F1	mg/Kg		36	70 - 130	89	35
o-Xylene	<0.00200	U F2 F1	0.0990	0.03713	F2 F1	mg/Kg		37	70 - 130	86	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-38587/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38572 — **Prep Batch: 38587**

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		11/03/22 08:39	11/03/22 22:42	1

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

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

Lab Sample ID: MB 880-38587/1-A
Matrix: Solid
Analysis Batch: 38572

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

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		11/03/22 08:39	11/03/22 22:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/03/22 08:39	11/03/22 22:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*11/03/22 08:39*	*11/03/22 22:42*	*1*
o-Terphenyl	*105*		*70 - 130*	*11/03/22 08:39*	*11/03/22 22:42*	*1*

Lab Sample ID: LCS 880-38587/2-A
Matrix: Solid
Analysis Batch: 38572

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38587

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1017		mg/Kg		102	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	946.9		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*82*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

Lab Sample ID: LCSD 880-38587/3-A
Matrix: Solid
Analysis Batch: 38572

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38587

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

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

Lab Sample ID: 880-21018-A-1-D MS
Matrix: Solid
Analysis Batch: 38572

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 38587

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 F2	997	1234		mg/Kg		122	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	997	975.4		mg/Kg		98	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*80*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

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

Lab Sample ID: 880-21018-A-1-E MSD
Matrix: Solid
Analysis Batch: 38572

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 38587

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 F2	999	867.6	F2	mg/Kg		85	70 - 130	35	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	954.1		mg/Kg		96	70 - 130	2	20

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38519/1-A
Matrix: Solid
Analysis Batch: 38700

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			11/04/22 08:33	1

Lab Sample ID: LCS 880-38519/2-A
Matrix: Solid
Analysis Batch: 38700

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.7		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-38519/3-A
Matrix: Solid
Analysis Batch: 38700

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	254.1		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-3354-2 MS
Matrix: Solid
Analysis Batch: 38700

Client Sample ID: SS10A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	75.2		252	327.0		mg/Kg		100	90 - 110		

Lab Sample ID: 890-3354-2 MSD
Matrix: Solid
Analysis Batch: 38700

Client Sample ID: SS10A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	75.2		252	326.8		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

GC VOA

Prep Batch: 38429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38429/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 38578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3354-1	SS10	Total/NA	Solid	8021B	38611
890-3354-2	SS10A	Total/NA	Solid	8021B	38611
MB 880-38429/5-A	Method Blank	Total/NA	Solid	8021B	38429
MB 880-38611/5-A	Method Blank	Total/NA	Solid	8021B	38611
LCS 880-38611/1-A	Lab Control Sample	Total/NA	Solid	8021B	38611
LCSD 880-38611/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38611
880-21089-A-41-D MS	Matrix Spike	Total/NA	Solid	8021B	38611
880-21089-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	38611

Prep Batch: 38611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3354-1	SS10	Total/NA	Solid	5035	
890-3354-2	SS10A	Total/NA	Solid	5035	
MB 880-38611/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38611/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38611/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21089-A-41-D MS	Matrix Spike	Total/NA	Solid	5035	
880-21089-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 38746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3354-1	SS10	Total/NA	Solid	Total BTEX	
890-3354-2	SS10A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 38572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3354-1	SS10	Total/NA	Solid	8015B NM	38587
890-3354-2	SS10A	Total/NA	Solid	8015B NM	38587
MB 880-38587/1-A	Method Blank	Total/NA	Solid	8015B NM	38587
LCS 880-38587/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38587
LCSD 880-38587/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38587
880-21018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	38587
880-21018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38587

Prep Batch: 38587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3354-1	SS10	Total/NA	Solid	8015NM Prep	
890-3354-2	SS10A	Total/NA	Solid	8015NM Prep	
MB 880-38587/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38587/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38587/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-21018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-21018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

GC Semi VOA

Analysis Batch: 38732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3354-1	SS10	Total/NA	Solid	8015 NM	
890-3354-2	SS10A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 38519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3354-1	SS10	Soluble	Solid	DI Leach	
890-3354-2	SS10A	Soluble	Solid	DI Leach	
MB 880-38519/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38519/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38519/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3354-2 MS	SS10A	Soluble	Solid	DI Leach	
890-3354-2 MSD	SS10A	Soluble	Solid	DI Leach	

Analysis Batch: 38700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3354-1	SS10	Soluble	Solid	300.0	38519
890-3354-2	SS10A	Soluble	Solid	300.0	38519
MB 880-38519/1-A	Method Blank	Soluble	Solid	300.0	38519
LCS 880-38519/2-A	Lab Control Sample	Soluble	Solid	300.0	38519
LCSD 880-38519/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38519
890-3354-2 MS	SS10A	Soluble	Solid	300.0	38519
890-3354-2 MSD	SS10A	Soluble	Solid	300.0	38519

Lab Chronicle

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

Client Sample ID: SS10
Date Collected: 11/01/22 11:30
Date Received: 11/01/22 14:30

Lab Sample ID: 890-3354-1
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	38611	11/03/22 10:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38578	11/04/22 03:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38746	11/04/22 14:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			38732	11/04/22 11:23	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38587	11/03/22 08:39	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38572	11/04/22 02:41	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	38519	11/02/22 14:35	CH	EET MID
Soluble	Analysis	300.0		5			38700	11/04/22 09:52	CH	EET MID

Client Sample ID: SS10A
Date Collected: 11/01/22 13:00
Date Received: 11/01/22 14:30

Lab Sample ID: 890-3354-2
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	38611	11/03/22 10:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38578	11/04/22 03:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38746	11/04/22 14:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			38732	11/04/22 11:23	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	38587	11/03/22 08:39	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38572	11/04/22 03:03	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	38519	11/02/22 14:35	CH	EET MID
Soluble	Analysis	300.0		1			38700	11/04/22 09:57	CH	EET MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

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

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Zia Hills 19-1

Job ID: 890-3354-1
SDG: Lea County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3354-1	SS10	Solid	11/01/22 11:30	11/01/22 14:30	2'
890-3354-2	SS10A	Solid	11/01/22 13:00	11/01/22 14:30	3'

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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 ____ of ____

Project Manager:	Josh Adams	Bill to: (if different)	
Company Name:	Ensolum	Company Name:	
Address:	3122 National Parks	Address:	
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone:	303-517-8457	Email:	

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:	Fin Hills 19-1	Turn Around	
Project Number:	Lea County S	☒ Routine	☐ Rush
Project Location:	03D 2024049	Due Date:	
Sampler's Name:	CB	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:	TMM-001	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	23.2	
Total Containers:		Corrected Temperature:	23.0	

ANALYSIS REQUEST — Parameters / Pres. Code

890-3354 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHL	BTX	TPH	Sample Comments
SS10	S	11-1	11:30	2 ft	G	1	✓	✓	✓	LC
SS10A	S	11-1	1300	3 ft	G	1	✓	✓	✓	A05420TSM

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature] Amanda	11/1/22 1430	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3354-1
SDG Number: Lea County

Login Number: 3354
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: 890-3354-1
SDG Number: Lea County

Login Number: 3354
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/03/22 10:17 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

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-17190-1
Laboratory Sample Delivery Group: Lea County,NM
Client Project/Site: Zia Hills 19-2

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
8/1/2022 9:58:31 AM

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

LINKS

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

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

Client: Ensolum
Project/Site: Zia Hills 19-2

Laboratory Job ID: 880-17190-1
SDG: Lea County,NM

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-17190-1
Project/Site: Zia Hills 19-2 SDG: Lea County,NM

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Job ID: 880-17190-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-17190-1

Receipt
The samples were received on 7/21/2022 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.9°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30562 and analytical batch 880-30657 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS02 (880-17190-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30294 and analytical batch 880-30749 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS03 (880-17190-3), FS04 (880-17190-4), FS05 (880-17190-5) and FS06 (880-17190-6). 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 samples were outside control limits: (890-2603-A-1-F), (890-2603-A-1-G MS) and (890-2603-A-1-H MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS03 (880-17190-3). 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: FS05 (880-17190-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-30624 and analytical batch 880-30643 contained Gasoline Range Organics (GRO)-C6-C10, Diesel Range Organics (Over C10-C28) and OII Range Organics (Over C28-C36) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-30624 and analytical batch 880-30643 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30247 and analytical batch 880-30493 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Case Narrative

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Job ID: 880-17190-1 (Continued)

Laboratory: Eurofins Midland (Continued)

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Client Sample ID: FS01

Lab Sample ID: 880-17190-1
Matrix: Solid
Date Collected: 07/14/22 11:15
Date Received: 07/21/22 08:00
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.200	U	0.200		mg/Kg		07/25/22 10:57	07/27/22 06:31	100
Toluene	<0.200	U	0.200		mg/Kg		07/25/22 10:57	07/27/22 06:31	100
Ethylbenzene	**0.261**		0.200		mg/Kg		07/25/22 10:57	07/27/22 06:31	100
m-Xylene & p-Xylene	**0.588**		0.400		mg/Kg		07/25/22 10:57	07/27/22 06:31	100
o-Xylene	<0.200	U	0.200		mg/Kg		07/25/22 10:57	07/27/22 06:31	100
Xylenes, Total	**0.588**		0.400		mg/Kg		07/25/22 10:57	07/27/22 06:31	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*07/25/22 10:57*	*07/27/22 06:31*	*100*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*07/25/22 10:57*	*07/27/22 06:31*	*100*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.849**		0.400		mg/Kg			07/27/22 09:48	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**4200**		49.9		mg/Kg			07/27/22 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**78.6**		49.9		mg/Kg		07/25/22 16:28	07/26/22 13:01	1
Diesel Range Organics (Over C10-C28)	**3790**		49.9		mg/Kg		07/25/22 16:28	07/26/22 13:01	1
Oil Range Organics (Over C28-C36)	**336**		49.9		mg/Kg		07/25/22 16:28	07/26/22 13:01	1
Total TPH	**4200**		49.9		mg/Kg		07/25/22 16:28	07/26/22 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*07/25/22 16:28*	*07/26/22 13:01*	*1*
o-Terphenyl	*81*		*70 - 130*	*07/25/22 16:28*	*07/26/22 13:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**265**		5.00		mg/Kg			07/26/22 11:07	1

Client Sample ID: FS02

Lab Sample ID: 880-17190-2
Matrix: Solid
Date Collected: 07/14/22 11:30
Date Received: 07/21/22 08:00
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0399	U	0.0399		mg/Kg		07/21/22 15:51	07/27/22 17:21	20
Toluene	<0.0399	U	0.0399		mg/Kg		07/21/22 15:51	07/27/22 17:21	20
Ethylbenzene	<0.0399	U	0.0399		mg/Kg		07/21/22 15:51	07/27/22 17:21	20
m-Xylene & p-Xylene	**0.758**		0.0798		mg/Kg		07/21/22 15:51	07/27/22 17:21	20
o-Xylene	**0.251**		0.0399		mg/Kg		07/21/22 15:51	07/27/22 17:21	20
Xylenes, Total	**1.01**		0.0798		mg/Kg		07/21/22 15:51	07/27/22 17:21	20

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Client Sample ID: FS02

Lab Sample ID: 880-17190-2
Matrix: Solid
Date Collected: 07/14/22 11:30
Date Received: 07/21/22 08:00
Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130	07/21/22 15:51	07/27/22 17:21	20
1,4-Difluorobenzene (Surr)	92		70 - 130	07/21/22 15:51	07/27/22 17:21	20

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	1.01		0.0798	mg/Kg			07/27/22 09:48	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	3050		49.9	mg/Kg			07/27/22 10:58	1

Method: 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		07/25/22 16:28	07/26/22 13:22	1
Diesel Range Organics (Over C10-C28)	2750		49.9	mg/Kg		07/25/22 16:28	07/26/22 13:22	1
Oil Range Organics (Over C28-C36)	298		49.9	mg/Kg		07/25/22 16:28	07/26/22 13:22	1
Total TPH	3050		49.9	mg/Kg		07/25/22 16:28	07/26/22 13:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	76		70 - 130	07/25/22 16:28	07/26/22 13:22	1
o-Terphenyl	79		70 - 130	07/25/22 16:28	07/26/22 13:22	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	919		50.0	mg/Kg			07/26/22 05:06	10

Client Sample ID: FS03

Lab Sample ID: 880-17190-3
Matrix: Solid
Date Collected: 07/18/22 10:00
Date Received: 07/21/22 08:00
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0994	U	0.0994	mg/Kg		07/29/22 12:56	07/31/22 18:50	50
Toluene	0.476		0.0994	mg/Kg		07/29/22 12:56	07/31/22 18:50	50
Ethylbenzene	2.15		0.0994	mg/Kg		07/29/22 12:56	07/31/22 18:50	50
m-Xylene & p-Xylene	9.38		0.199	mg/Kg		07/29/22 12:56	07/31/22 18:50	50
o-Xylene	2.46		0.0994	mg/Kg		07/29/22 12:56	07/31/22 18:50	50
Xylenes, Total	11.8		0.199	mg/Kg		07/29/22 12:56	07/31/22 18:50	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	239	S1+	70 - 130	07/29/22 12:56	07/31/22 18:50	50
1,4-Difluorobenzene (Surr)	87		70 - 130	07/29/22 12:56	07/31/22 18:50	50

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	14.5		0.199	mg/Kg			07/27/22 09:48	1

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Client Sample ID: FS03

Lab Sample ID: 880-17190-3
Matrix: Solid
Date Collected: 07/18/22 10:00
Date Received: 07/21/22 08:00
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	6340		49.9		mg/Kg			07/27/22 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	407		49.9		mg/Kg		07/25/22 16:28	07/26/22 13:44	1
Diesel Range Organics (Over C10-C28)	5440		49.9		mg/Kg		07/25/22 16:28	07/26/22 13:44	1
Oil Range Organics (Over C28-C36)	490		49.9		mg/Kg		07/25/22 16:28	07/26/22 13:44	1
Total TPH	6340		49.9		mg/Kg		07/25/22 16:28	07/26/22 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*132*	*S1+*	*70 - 130*	*07/25/22 16:28*	*07/26/22 13:44*	*1*
o-Terphenyl	*113*		*70 - 130*	*07/25/22 16:28*	*07/26/22 13:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	344		4.96		mg/Kg			07/26/22 11:15	1

Client Sample ID: FS04

Lab Sample ID: 880-17190-4
Matrix: Solid
Date Collected: 07/18/22 10:25
Date Received: 07/21/22 08:00
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0996	U	0.0996		mg/Kg		07/29/22 12:56	07/31/22 19:10	50
Toluene	0.779		0.0996		mg/Kg		07/29/22 12:56	07/31/22 19:10	50
Ethylbenzene	4.09		0.0996		mg/Kg		07/29/22 12:56	07/31/22 19:10	50
m-Xylene & p-Xylene	17.5		0.199		mg/Kg		07/29/22 12:56	07/31/22 19:10	50
o-Xylene	4.19		0.0996		mg/Kg		07/29/22 12:56	07/31/22 19:10	50
Xylenes, Total	21.7		0.199		mg/Kg		07/29/22 12:56	07/31/22 19:10	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*07/29/22 12:56*	*07/31/22 19:10*	*50*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/29/22 12:56*	*07/31/22 19:10*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	26.6		0.199		mg/Kg			07/27/22 09:48	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	3780		49.9		mg/Kg			07/27/22 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	531		49.9		mg/Kg		07/25/22 16:28	07/26/22 14:06	1
Diesel Range Organics (Over C10-C28)	2990		49.9		mg/Kg		07/25/22 16:28	07/26/22 14:06	1

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Client Sample ID: FS04

Lab Sample ID: 880-17190-4
Matrix: Solid
Date Collected: 07/18/22 10:25
Date Received: 07/21/22 08:00
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	259		49.9		mg/Kg		07/25/22 16:28	07/26/22 14:06	1
Total TPH	3780		49.9		mg/Kg		07/25/22 16:28	07/26/22 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*07/25/22 16:28*	*07/26/22 14:06*	*1*
o-Terphenyl	*87*		*70 - 130*	*07/25/22 16:28*	*07/26/22 14:06*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32.3		4.99		mg/Kg			07/26/22 05:38	1

Client Sample ID: FS05

Lab Sample ID: 880-17190-5
Matrix: Solid
Date Collected: 07/18/22 14:00
Date Received: 07/21/22 08:00
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.100	U	0.100		mg/Kg		07/29/22 12:56	07/31/22 19:31	50
Toluene	0.451		0.100		mg/Kg		07/29/22 12:56	07/31/22 19:31	50
Ethylbenzene	2.96		0.100		mg/Kg		07/29/22 12:56	07/31/22 19:31	50
m-Xylene & p-Xylene	13.0		0.200		mg/Kg		07/29/22 12:56	07/31/22 19:31	50
o-Xylene	3.52		0.100		mg/Kg		07/29/22 12:56	07/31/22 19:31	50
Xylenes, Total	16.5		0.200		mg/Kg		07/29/22 12:56	07/31/22 19:31	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*279*	*S1+*	*70 - 130*	*07/29/22 12:56*	*07/31/22 19:31*	*50*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/29/22 12:56*	*07/31/22 19:31*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	19.9		0.200		mg/Kg			07/27/22 09:48	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	7770		50.0		mg/Kg			07/27/22 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	619		50.0		mg/Kg		07/25/22 16:28	07/26/22 14:27	1
Diesel Range Organics (Over C10-C28)	6620		50.0		mg/Kg		07/25/22 16:28	07/26/22 14:27	1
Oil Range Organics (Over C28-C36)	535		50.0		mg/Kg		07/25/22 16:28	07/26/22 14:27	1
Total TPH	7770		50.0		mg/Kg		07/25/22 16:28	07/26/22 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*138*	*S1+*	*70 - 130*	*07/25/22 16:28*	*07/26/22 14:27*	*1*
o-Terphenyl	*117*		*70 - 130*	*07/25/22 16:28*	*07/26/22 14:27*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Client Sample ID: FS05
Date Collected: 07/18/22 14:00
Date Received: 07/21/22 08:00
Sample Depth: 0.5

Lab Sample ID: 880-17190-5
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**145**		25.2		mg/Kg			07/26/22 05:45	5

Client Sample ID: FS06
Date Collected: 07/18/22 14:25
Date Received: 07/21/22 08:00
Sample Depth: 0.5

Lab Sample ID: 880-17190-6
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.101	U	0.101		mg/Kg		07/29/22 12:56	07/31/22 19:52	50
Toluene	**0.109**		0.101		mg/Kg		07/29/22 12:56	07/31/22 19:52	50
Ethylbenzene	**0.987**		0.101		mg/Kg		07/29/22 12:56	07/31/22 19:52	50
m-Xylene & p-Xylene	**3.56**		0.201		mg/Kg		07/29/22 12:56	07/31/22 19:52	50
o-Xylene	**0.775**		0.101		mg/Kg		07/29/22 12:56	07/31/22 19:52	50
Xylenes, Total	**4.34**		0.201		mg/Kg		07/29/22 12:56	07/31/22 19:52	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*	*07/29/22 12:56*	*07/31/22 19:52*	*50*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/29/22 12:56*	*07/31/22 19:52*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**5.43**		0.201		mg/Kg			07/27/22 09:48	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**4650**		50.0		mg/Kg			07/27/22 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**122**		50.0		mg/Kg		07/25/22 16:28	07/26/22 14:49	1
Diesel Range Organics (Over C10-C28)	**4170**		50.0		mg/Kg		07/25/22 16:28	07/26/22 14:49	1
Oil Range Organics (Over C28-C36)	**354**		50.0		mg/Kg		07/25/22 16:28	07/26/22 14:49	1
Total TPH	**4650**		50.0		mg/Kg		07/25/22 16:28	07/26/22 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*07/25/22 16:28*	*07/26/22 14:49*	*1*
o-Terphenyl	*85*		*70 - 130*	*07/25/22 16:28*	*07/26/22 14:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**89.4**		5.05		mg/Kg			07/26/22 05:53	1

Surrogate Summary

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Method: 8021B - Volatile Organic Compounds (GC)

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits) BFB1 (70-130)	DFBZ1 (70-130)
880-17068-A-21-G MS	Matrix Spike	102	116
880-17068-A-21-H MSD	Matrix Spike Duplicate	107	117
880-17190-1	FS01	119	88
880-17190-2	FS02	146 S1+	92
880-17190-3	FS03	239 S1+	87
880-17190-4	FS04	68 S1-	87
880-17190-5	FS05	279 S1+	87
880-17190-6	FS06	147 S1+	90
890-2603-A-1-D MS	Matrix Spike	103	85
890-2603-A-1-E MSD	Matrix Spike Duplicate	107	92
890-2666-A-3-D MS	Matrix Spike	108	99
890-2666-A-3-E MSD	Matrix Spike Duplicate	99	93
890-2674-A-2-D MS	Matrix Spike	109	101
890-2674-A-2-E MSD	Matrix Spike Duplicate	105	98
LCS 880-30294/1-A	Lab Control Sample	84	123
LCS 880-30562/1-A	Lab Control Sample	106	94
LCS 880-31008/1-A	Lab Control Sample	100	98
LCS 880-31012/1-A	Lab Control Sample	105	101
LCSD 880-30294/2-A	Lab Control Sample Dup	85	111
LCSD 880-30562/2-A	Lab Control Sample Dup	104	94
LCSD 880-31008/2-A	Lab Control Sample Dup	103	98
LCSD 880-31012/2-A	Lab Control Sample Dup	111	97
MB 880-30294/5-A	Method Blank	88	108
MB 880-30562/5-A	Method Blank	90	84
MB 880-30664/5-A	Method Blank	100	87
MB 880-31008/5-A	Method Blank	100	87
MB 880-31012/5-A	Method Blank	100	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**

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits) 1CO1 (70-130)	OTPH1 (70-130)
880-17190-1	FS01	78	81
880-17190-2	FS02	76	79
880-17190-3	FS03	132 S1+	113
880-17190-4	FS04	117	87
880-17190-5	FS05	138 S1+	117
880-17190-6	FS06	78	85
890-2603-A-1-G MS	Matrix Spike	77	67 S1-
890-2603-A-1-H MSD	Matrix Spike Duplicate	66 S1-	56 S1-
LCS 880-30624/2-A	Lab Control Sample	113	109
LCSD 880-30624/3-A	Lab Control Sample Dup	101	101
MB 880-30624/1-A	Method Blank	82	87

Surrogate Legend

Surrogate Summary

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30294/5-A
Matrix: Solid
Analysis Batch: 30749

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30294

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 15:51	07/27/22 11:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 15:51	07/27/22 11:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 15:51	07/27/22 11:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/21/22 15:51	07/27/22 11:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 15:51	07/27/22 11:48	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/21/22 15:51	07/27/22 11:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/21/22 15:51*	*07/27/22 11:48*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*07/21/22 15:51*	*07/27/22 11:48*	*1*

Lab Sample ID: LCS 880-30294/1-A
Matrix: Solid
Analysis Batch: 30749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30294

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1018		mg/Kg		102	70 - 130		
Toluene			0.100	0.1066		mg/Kg		107	70 - 130		
Ethylbenzene			0.100	0.1055		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2083		mg/Kg		104	70 - 130		
o-Xylene			0.100	0.1026		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*

Lab Sample ID: LCSD 880-30294/2-A
Matrix: Solid
Analysis Batch: 30749

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30294

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09468		mg/Kg		95	70 - 130	7	35
Toluene			0.100	0.09904		mg/Kg		99	70 - 130	7	35
Ethylbenzene			0.100	0.1007		mg/Kg		101	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1979		mg/Kg		99	70 - 130	5	35
o-Xylene			0.100	0.09739		mg/Kg		97	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: MB 880-30562/5-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30562

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/22 10:57	07/26/22 22:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/22 10:57	07/26/22 22:37	1

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

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

Lab Sample ID: MB 880-30562/5-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30562

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/22 10:57	07/26/22 22:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/25/22 10:57	07/26/22 22:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/22 10:57	07/26/22 22:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/25/22 10:57	07/26/22 22:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*07/25/22 10:57*	*07/26/22 22:37*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*07/25/22 10:57*	*07/26/22 22:37*	*1*

Lab Sample ID: LCS 880-30562/1-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30562

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09490		mg/Kg		95	70 - 130		
Toluene			0.100	0.09745		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.1000		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			0.200	0.2002		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.1107		mg/Kg		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: LCSD 880-30562/2-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30562

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1003		mg/Kg		100	70 - 130	6	35
Toluene			0.100	0.1020		mg/Kg		102	70 - 130	5	35
Ethylbenzene			0.100	0.1039		mg/Kg		104	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.2077		mg/Kg		104	70 - 130	4	35
o-Xylene			0.100	0.1145		mg/Kg		114	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: MB 880-30664/5-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30664

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 12:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 12:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 12:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/26/22 09:25	07/26/22 12:01	1

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

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

Lab Sample ID: MB 880-30664/5-A
Matrix: Solid
Analysis Batch: 30657

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30664

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/26/22 09:25	07/26/22 12:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/26/22 09:25	07/26/22 12:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/26/22 09:25*	*07/26/22 12:01*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/26/22 09:25*	*07/26/22 12:01*	*1*

Lab Sample ID: MB 880-31008/5-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31008

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 12:56	07/31/22 12:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/29/22 12:56*	*07/31/22 12:18*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/29/22 12:56*	*07/31/22 12:18*	*1*

Lab Sample ID: LCS 880-31008/1-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31008

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08240		mg/Kg		82	70 - 130		
Toluene			0.100	0.07858		mg/Kg		79	70 - 130		
Ethylbenzene			0.100	0.08153		mg/Kg		82	70 - 130		
m-Xylene & p-Xylene			0.200	0.1657		mg/Kg		83	70 - 130		
o-Xylene			0.100	0.09065		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-31008/2-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31008

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1013		mg/Kg		101	70 - 130	21	35
Toluene			0.100	0.09750		mg/Kg		98	70 - 130	21	35
Ethylbenzene			0.100	0.1006		mg/Kg		101	70 - 130	21	35
m-Xylene & p-Xylene			0.200	0.2029		mg/Kg		101	70 - 130	20	35
o-Xylene			0.100	0.1108		mg/Kg		111	70 - 130	20	35

Eurofins Midland

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: MB 880-31012/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31093 — **Prep Batch: 31012**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 13:33	07/31/22 22:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	07/29/22 13:33	07/31/22 22:55	1
1,4-Difluorobenzene (Surr)	86		70 - 130	07/29/22 13:33	07/31/22 22:55	1

Lab Sample ID: LCS 880-31012/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31093 — **Prep Batch: 31012**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09484		mg/Kg		95	70 - 130		
Toluene			0.100	0.08991		mg/Kg		90	70 - 130		
Ethylbenzene			0.100	0.09258		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene			0.200	0.1866		mg/Kg		93	70 - 130		
o-Xylene			0.100	0.09997		mg/Kg		100	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 880-31012/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31093 — **Prep Batch: 31012**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08621		mg/Kg		86	70 - 130	10	35
Toluene			0.100	0.08683		mg/Kg		87	70 - 130	3	35
Ethylbenzene			0.100	0.09088		mg/Kg		91	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1891		mg/Kg		95	70 - 130	1	35
o-Xylene			0.100	0.1128		mg/Kg		113	70 - 130	12	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

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

Lab Sample ID: MB 880-30624/1-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30624

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		07/25/22 16:28	07/26/22 09:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/25/22 16:28	07/26/22 09:44	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/25/22 16:28	07/26/22 09:44	1
Total TPH	<50.0	U	50.0		mg/Kg		07/25/22 16:28	07/26/22 09:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/25/22 16:28*	*07/26/22 09:44*	*1*
o-Terphenyl	*87*		*70 - 130*	*07/25/22 16:28*	*07/26/22 09:44*	*1*

Lab Sample ID: LCS 880-30624/2-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30624

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	922.1		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1096		mg/Kg		110	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*113*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: LCSD 880-30624/3-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30624

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	836.9		mg/Kg		84	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	975.9		mg/Kg		98	70 - 130	12	20

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30247/1-A
Matrix: Solid
Analysis Batch: 30493

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			07/26/22 02:21	1

QC Sample Results

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-30247/2-A
Matrix: Solid
Analysis Batch: 30493

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	263.3		mg/Kg		105	90 - 110

Lab Sample ID: LCSD 880-30247/3-A
Matrix: Solid
Analysis Batch: 30493

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	263.8		mg/Kg		106	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

GC VOA

Prep Batch: 30294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-2	FS02	Total/NA	Solid	5035	
MB 880-30294/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30294/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30294/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 30562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-1	FS01	Total/NA	Solid	5035	
MB 880-30562/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30562/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30562/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 30657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-1	FS01	Total/NA	Solid	8021B	30562
MB 880-30562/5-A	Method Blank	Total/NA	Solid	8021B	30562
MB 880-30664/5-A	Method Blank	Total/NA	Solid	8021B	30664
LCS 880-30562/1-A	Lab Control Sample	Total/NA	Solid	8021B	30562
LCSD 880-30562/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30562

Prep Batch: 30664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30664/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 30749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-2	FS02	Total/NA	Solid	8021B	30294
MB 880-30294/5-A	Method Blank	Total/NA	Solid	8021B	30294
LCS 880-30294/1-A	Lab Control Sample	Total/NA	Solid	8021B	30294
LCSD 880-30294/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30294

Analysis Batch: 30789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-1	FS01	Total/NA	Solid	Total BTEX	
880-17190-2	FS02	Total/NA	Solid	Total BTEX	
880-17190-3	FS03	Total/NA	Solid	Total BTEX	
880-17190-4	FS04	Total/NA	Solid	Total BTEX	
880-17190-5	FS05	Total/NA	Solid	Total BTEX	
880-17190-6	FS06	Total/NA	Solid	Total BTEX	

Prep Batch: 31008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-3	FS03	Total/NA	Solid	5035	
880-17190-4	FS04	Total/NA	Solid	5035	
880-17190-5	FS05	Total/NA	Solid	5035	
880-17190-6	FS06	Total/NA	Solid	5035	
MB 880-31008/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31008/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31008/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

GC VOA

Prep Batch: 31012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31012/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31012/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31012/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 31093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-3	FS03	Total/NA	Solid	8021B	31008
880-17190-4	FS04	Total/NA	Solid	8021B	31008
880-17190-5	FS05	Total/NA	Solid	8021B	31008
880-17190-6	FS06	Total/NA	Solid	8021B	31008
MB 880-31008/5-A	Method Blank	Total/NA	Solid	8021B	31008
MB 880-31012/5-A	Method Blank	Total/NA	Solid	8021B	31012
LCS 880-31008/1-A	Lab Control Sample	Total/NA	Solid	8021B	31008
LCS 880-31012/1-A	Lab Control Sample	Total/NA	Solid	8021B	31012
LCSD 880-31008/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31008
LCSD 880-31012/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31012

GC Semi VOA

Prep Batch: 30624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-1	FS01	Total/NA	Solid	8015NM Prep	
880-17190-2	FS02	Total/NA	Solid	8015NM Prep	
880-17190-3	FS03	Total/NA	Solid	8015NM Prep	
880-17190-4	FS04	Total/NA	Solid	8015NM Prep	
880-17190-5	FS05	Total/NA	Solid	8015NM Prep	
880-17190-6	FS06	Total/NA	Solid	8015NM Prep	
MB 880-30624/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30624/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30624/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-1	FS01	Total/NA	Solid	8015B NM	30624
880-17190-2	FS02	Total/NA	Solid	8015B NM	30624
880-17190-3	FS03	Total/NA	Solid	8015B NM	30624
880-17190-4	FS04	Total/NA	Solid	8015B NM	30624
880-17190-5	FS05	Total/NA	Solid	8015B NM	30624
880-17190-6	FS06	Total/NA	Solid	8015B NM	30624
MB 880-30624/1-A	Method Blank	Total/NA	Solid	8015B NM	30624
LCS 880-30624/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30624
LCSD 880-30624/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30624

Analysis Batch: 30798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-1	FS01	Total/NA	Solid	8015 NM	
880-17190-2	FS02	Total/NA	Solid	8015 NM	
880-17190-3	FS03	Total/NA	Solid	8015 NM	
880-17190-4	FS04	Total/NA	Solid	8015 NM	
880-17190-5	FS05	Total/NA	Solid	8015 NM	
880-17190-6	FS06	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

HPLC/IC

Leach Batch: 30247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-1	FS01	Soluble	Solid	DI Leach	
880-17190-2	FS02	Soluble	Solid	DI Leach	
880-17190-3	FS03	Soluble	Solid	DI Leach	
880-17190-4	FS04	Soluble	Solid	DI Leach	
880-17190-5	FS05	Soluble	Solid	DI Leach	
880-17190-6	FS06	Soluble	Solid	DI Leach	
MB 880-30247/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30247/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30247/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 30493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17190-1	FS01	Soluble	Solid	300.0	30247
880-17190-2	FS02	Soluble	Solid	300.0	30247
880-17190-3	FS03	Soluble	Solid	300.0	30247
880-17190-4	FS04	Soluble	Solid	300.0	30247
880-17190-5	FS05	Soluble	Solid	300.0	30247
880-17190-6	FS06	Soluble	Solid	300.0	30247
MB 880-30247/1-A	Method Blank	Soluble	Solid	300.0	30247
LCS 880-30247/2-A	Lab Control Sample	Soluble	Solid	300.0	30247
LCSD 880-30247/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30247

Lab Chronicle

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Client Sample ID: FS01
Lab Sample ID: 880-17190-1
Date Collected: 07/14/22 11:15
Matrix: Solid
Date Received: 07/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30562	07/25/22 10:57	EL	XEN MID
Total/NA	Analysis	8021B		100	30657	07/27/22 06:31	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30789	07/27/22 09:48	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30798	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			30624	07/25/22 16:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30643	07/26/22 13:01	AJ	XEN MID
Soluble	Leach	DI Leach			30247	07/21/22 12:30	SMC	XEN MID
Soluble	Analysis	300.0		1	30493	07/26/22 11:07	CH	XEN MID

Client Sample ID: FS02
Lab Sample ID: 880-17190-2
Date Collected: 07/14/22 11:30
Matrix: Solid
Date Received: 07/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30294	07/21/22 15:51	MR	XEN MID
Total/NA	Analysis	8021B		20	30749	07/27/22 17:21	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30789	07/27/22 09:48	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30798	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			30624	07/25/22 16:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30643	07/26/22 13:22	AJ	XEN MID
Soluble	Leach	DI Leach			30247	07/21/22 12:30	SMC	XEN MID
Soluble	Analysis	300.0		10	30493	07/26/22 05:06	CH	XEN MID

Client Sample ID: FS03
Lab Sample ID: 880-17190-3
Date Collected: 07/18/22 10:00
Matrix: Solid
Date Received: 07/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			31008	07/29/22 12:56	EL	XEN MID
Total/NA	Analysis	8021B		50	31093	07/31/22 18:50	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30789	07/27/22 09:48	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30798	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			30624	07/25/22 16:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30643	07/26/22 13:44	AJ	XEN MID
Soluble	Leach	DI Leach			30247	07/21/22 12:30	SMC	XEN MID
Soluble	Analysis	300.0		1	30493	07/26/22 11:15	CH	XEN MID

Client Sample ID: FS04
Lab Sample ID: 880-17190-4
Date Collected: 07/18/22 10:25
Matrix: Solid
Date Received: 07/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			31008	07/29/22 12:56	EL	XEN MID
Total/NA	Analysis	8021B		50	31093	07/31/22 19:10	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30789	07/27/22 09:48	SM	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Client Sample ID: FS04
Date Collected: 07/18/22 10:25
Date Received: 07/21/22 08:00

Lab Sample ID: 880-17190-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	30798	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			30624	07/25/22 16:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30643	07/26/22 14:06	AJ	XEN MID
Soluble	Leach	DI Leach			30247	07/21/22 12:30	SMC	XEN MID
Soluble	Analysis	300.0		1	30493	07/26/22 05:38	CH	XEN MID

Client Sample ID: FS05
Date Collected: 07/18/22 14:00
Date Received: 07/21/22 08:00

Lab Sample ID: 880-17190-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			31008	07/29/22 12:56	EL	XEN MID
Total/NA	Analysis	8021B		50	31093	07/31/22 19:31	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30789	07/27/22 09:48	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30798	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			30624	07/25/22 16:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30643	07/26/22 14:27	AJ	XEN MID
Soluble	Leach	DI Leach			30247	07/21/22 12:30	SMC	XEN MID
Soluble	Analysis	300.0		5	30493	07/26/22 05:45	CH	XEN MID

Client Sample ID: FS06
Date Collected: 07/18/22 14:25
Date Received: 07/21/22 08:00

Lab Sample ID: 880-17190-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			31008	07/29/22 12:56	EL	XEN MID
Total/NA	Analysis	8021B		50	31093	07/31/22 19:52	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30789	07/27/22 09:48	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30798	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			30624	07/25/22 16:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30643	07/26/22 14:49	AJ	XEN MID
Soluble	Leach	DI Leach			30247	07/21/22 12:30	SMC	XEN MID
Soluble	Analysis	300.0		1	30493	07/26/22 05:53	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Zia Hills 19-2

Job ID: 880-17190-1
SDG: Lea County,NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-17190-1	FS01	Solid	07/14/22 11:15	07/21/22 08:00	0.5
880-17190-2	FS02	Solid	07/14/22 11:30	07/21/22 08:00	0.5
880-17190-3	FS03	Solid	07/18/22 10:00	07/21/22 08:00	0.5
880-17190-4	FS04	Solid	07/18/22 10:25	07/21/22 08:00	0.5
880-17190-5	FS05	Solid	07/18/22 14:00	07/21/22 08:00	0.5
880-17190-6	FS06	Solid	07/18/22 14:25	07/21/22 08:00	0.5

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8/1/2022

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 _____ of _____

Project Manager	Kalei Jennings	Bill to (if different)	Kalei Jennings
Company Name	Ensolum	Company Name	Ensolum, LLC
Address	601 North Marienfeld Street	Address	
City, State ZIP	Midland, TX 79701	City, State ZIP	
Phone	817-683-2503	Email	kjennings@ensolum com

Work Order Comments

Program. UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☒ ADaPT ☐ Other

Project Name	Zia Hills 19-1	Turn Around	
Project Number	03D2024049	☑ Routine ☐ Rush	
Project Location	Lea County, NM	Due Date.	5 day TAT
Sampler's Name	Liz Cheli	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	IR8	
Cooler Custody Seals	(Yes) No N/A	Correction Factor	+.2	
Sample Custody Seals	(Yes) No N/A	Temperature Reading	17	
Total Containers		Corrected Temperature.	19	

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	S	7/14/2022	11 15	0 5	Comp	1		x	x	x	Incident ID NAPP2215827276
FS02	S	7/14/2022	11 30	0 5	Comp	1		x	x	x	
FS03	S	7/18/2022	10 00	0 5	Comp	1		x	x	x	Cost Center
FS04	S	7/18/2022	10 25	0 5	Comp	1		x	x	x	
FS05	S	7/18/2022	14 00	0 5	Comp	1		x	x	x	AFE
FS06	S	7/18/2022	14 25	0 5	Comp	1		x	x	x	

880-17190 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010** 8RCRA Sb As Ba Be Cd C

SiO_2 Na Sr Tl Sn U V Zn
g 1631 / 245 1 / 7470 / 7471

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

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1 Kalei Jennings		7/20/22 0900	2		
3			4		
5			6		

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Received by OCD: 4/24/2023 11:36:26 AM

Released to Imaging: 6/21/2023 2:22:52 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-17190-1
SDG Number: Lea County,NM

Login Number: 17190
List Number: 1
Creator: Teel, Brianna

List Source: Eurofins Midland

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

NMOCD Notifications

From: Nobui, Jennifer, EMNRD
To: Kalei Jennings
Cc: Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Subject: FW: [EXTERNAL] COP-Sampling Notification (Week of 07/11/22-07/15/22)
Date: Friday, July 8, 2022 9:18:09 AM
Attachments: image001.png
image002.png
image003.png
image004.png

[**EXTERNAL EMAIL**]

Kalei

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

Thanks,
Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Friday, July 8, 2022 8:13 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Subject: Fw: [EXTERNAL] COP-Sampling Notification (Week of 07/11/22-07/15/22)

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, July 7, 2022 2:16 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Subject: [EXTERNAL] COP-Sampling Notification (Week of 07/11/22-07/15/22)

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

All,

COP plans to complete final sampling activities at the following sites the week of July 11, 2022.

Monday:

Tuesday:

Wednesday:

- Raspberry State Com 001H / NAPP2213029810

Thursday:

- Zia Hills 19-1 / NAPP2215827276

Friday:

Thank you,

Kalei Jennings
Senior Scientist
817-683-2503
Ensolum, LLC

From: Nobui, Jennifer, EMNRD
To: Kalei Jennings
Cc: Bratcher, Mike, EMNRD; Harimon, Jocelyn, EMNRD; Hamlet, Robert, EMNRD
Subject: FW: [EXTERNAL] COP- Sampling Notification (Week of 07/18/22-07/22/22)
Date: Thursday, July 14, 2022 12:04:58 PM
Attachments: image001.png
image002.png
image003.png
image004.png

[**EXTERNAL EMAIL**]

Kalei

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

Thanks,
Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Thursday, July 14, 2022 10:39 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Subject: Fw: [EXTERNAL] COP- Sampling Notification (Week of 07/18/22-07/22/22)

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, July 14, 2022 10:35 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Subject: [EXTERNAL] COP- Sampling Notification (Week of 07/18/22-07/22/22)

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

All,

COP plans to complete final sampling activities at the following sites the week of July 18, 2022.

Monday:

- Zia Hills 19-1 / NAPP2215827276

Tuesday:

- King Tut Federal Com 001H / NAPP2127234076

Wednesday:

- King Tut Federal Com 001H / NAPP2127234076

Thursday:

Friday:

Thank you,

Kalei Jennings
Senior Scientist
817-683-2503
Ensolum, LLC

From: Beauvais, Charles R
To: Kalei Jennings
Subject: FW: [EXTERNAL] Extension Request - Zia Hills 19-1 (Incident Number NAPP2215827276)
Date: Monday, August 22, 2022 11:43:38 AM
Attachments: image001.png

[**EXTERNAL EMAIL**]

FYI

From: Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>
Sent: Monday, August 22, 2022 10:30 AM
To: Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>
Subject: FW: [EXTERNAL] Extension Request - Zia Hills 19-1 (Incident Number NAPP2215827276)

CAUTION:This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Charles

Your request for an extension to **November 19th, 2022** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Thanks
Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Monday, August 22, 2022 10:17 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Subject: Fw: [EXTERNAL] Extension Request - Zia Hills 19-1 (Incident Number NAPP2215827276)

From: Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>
Sent: Monday, August 22, 2022 10:09 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; EMNRD-OCD-District1spills <EMNRD-OCD-District1spills@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; CFO_Spill, BLM_NM <BLM_NM_CFO_Spill@blm.gov>
Cc: Fejervary Morena, Gustavo A <G.Fejervary@conocophillips.com>; Esparza, Brittany

<Brittany.Esparza@conocophillips.com>
Subject: [EXTERNAL] Extension Request - Zia Hills 19-1 (Incident Number NAPP2215827276)

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

To Whom It May Concern,

ConocoPhillips Company (COP) is requesting an extension for the current deadline of August 21, 2022, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for Zia Hills 19-1 (Incident Number NAPP2215827276). The release was discovered on May 23, 2022, and initial site assessment activities have been completed. The release occurred within equipment and saturated soil was hand shoveled to the extent possible. Residual hydrocarbons were treated on August 3, 2022 with Microblaze to aid in the natural attenuation process. Based on the most recent laboratory analytical results, the first application of Microblaze has not reduced residual hydrocarbon concentrations to below the Closure Criteria. In order to allow flowback equipment to be removed, complete additional remediation activities, and allow time to submit a remediation work plan or closure report, COP requests a 90-day extension of this deadline until November 19, 2022.

Respectfully,

Charles R. Beauvais II
Senior Environmental Engineer | Environmental Operations | **ConocoPhillips**
(M) 575-988-2043
Charles.R.Beauvais@conocophillips.com

Our work is never so urgent or important that we cannot take the time to do it safely and in an environmentally responsible manner.

From: OCDOnline@state.nm.us
To: Kalei Jennings
Subject: The Oil Conservation Division (OCD) has rejected the application, Application ID: 160446
Date: Monday, December 19, 2022 12:59:51 PM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Kalei Jennings for CONOCOPHILLIPS COMPANY),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2215827276,
for the following reasons:

- **Deferral Request Denied. The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. Please submit dtw data before OCD can evaluate the deferral. Please submit a revised Deferral Request by January 19, 2023.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 160446.
Please review and make the required correction(s) prior to resubmitting.
If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,
Jennifer Nobui
Environmental Specialist-Advanced
505-470-3407
Jennifer.Nobui@emnrd.nm.gov

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

From: OCDOnline@state.nm.us
To: Kalei Jennings
Subject: The Oil Conservation Division (OCD) has approved the application, Application ID: 182573
Date: Tuesday, February 21, 2023 2:15:04 PM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Kalei Jennings for CONOCOPHILLIPS COMPANY),

The OCD has approved the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2215827276, with the following conditions:

- **Remediation Plan Approved.**

The signed C-141 can be found in the OCD Online: Imaging under the incident ID (n#).

If you have any questions regarding this application, please contact me.

Thank you,
Jennifer Nobui
Environmental Specialist-Advanced
505-470-3407
Jennifer.Nobui@emnrd.nm.gov

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 210121

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 210121
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Deferral request approved.	6/21/2023