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	NAPP2319954265
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

			rtesp		,			
Responsible	Party XTC) Energy		OGRID 5	5380			
Contact Name Garrett Green				Contact Te	Contact Telephone 575-200-0729			
Contact email garrett.green@exxonmobil.com				Incident #	(assigned by OCD)			
Contact mail	ing address	3104 E. Greene St	reet, Carlsbad, Ne	w Mexico, 88220				
			Location	of Release So	ource			
Latitude 32.	45072			Longitude	-103.92541			
Lantade			(NAD 83 in dec	cimal degrees to 5 decim	nal places)			
Site Name	lames Ranch	Unit Booster		Site Type	nipeline			
Date Release				API# (if app				
Unit Letter	Section	Township	Range	Coun	nty			
Е	30	21S	30E	Eddy	Eddy			
Surface Owne	r: State	➤ Federal ☐ Tr	ribal	Name:)		
			Nature and	l Volume of I	Release			
				calculations or specific		volumes provided below)		
Crude Oi		Volume Release			Volume Recovered (bbls)			
➤ Produced	Water	Volume Release	15.00		Volume Recovered (bbls) 0			
		in the produced	tion of total dissolv water >10,000 mg	` '	☐ Yes ☐ No			
Condensa	ite	Volume Release	d (bbls)		Volume Reco	vered (bbls)		
☐ Natural G	ias	Volume Release	d (Mcf)		Volume Recovered (Mcf)			
Other (de	scribe)	Volume/Weight	Released (provide	e units)	Volume/Weig	ght Recovered (provide units)		
Cause of Rel	vacuun	party water transfer n chamber resulted ation purposes.	operator reported in fluids released	l a leak on temporar to permeable grour	ry water transfe nd. A third-part	r pump. A failed gasket on pump suction ty contractor has veen retained for		

Received by OCD: 10/3/2023 3:47:35 PM State of New Mexico
Page 2 Oil Conservation Division

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Incident ID	NAPP2319954265	
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Was this a major release as defined by	If YES, for what reason(s) does the respo	nsible party consider this a major release?
19.15.29.7(A) NMAC?	N/A	
☐ Yes 🗷 No		
ISVEC i di-t	ation since to the OCD2 December 2 Target	When and brooket many (about a small etc.)?
N/A	Since given to the OCD? By whom? To wi	nom? When and by what means (phone, email, etc)?
	Initial R	esponse
The responsible i	party must undertake the following actions immediate	ly unless they could create a safety hazard that would result in injury
➤ The source of the rele	ease has been stopped.	
	is been secured to protect human health and	the environment.
	•	likes, absorbent pads, or other containment devices.
★ All free liquids and re	ecoverable materials have been removed an	d managed appropriately.
If all the actions described	d above have <u>not</u> been undertaken, explain	why:
NA		
		remediation immediately after discovery of a release. If remediation
		efforts have been successfully completed or if the release occurred blease attach all information needed for closure evaluation.
I hereby certify that the info	rmation given above is true and complete to the	best of my knowledge and understand that pursuant to OCD rules and
		fications and perform corrective actions for releases which may endanger DCD does not relieve the operator of liability should their operations have
failed to adequately investig	ate and remediate contamination that pose a three	eat to groundwater, surface water, human health or the environment. In responsibility for compliance with any other federal, state, or local laws
and/or regulations.		
Printed Name: Garrett G	reen	Title: SSHE Coordinator
Signature:	A Sun	Date:
email: garrett.green@exx	konmobil.com	Telephone: 575-200-0729
		Totophono.
OCD Only		
	ls	Date: 7/19/2022
Received by. Shelly Well	<u></u>	Date: 7/18/2023

te of New Mexico

Incident ID NAPP2319954265

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Application ID	

Site Assessment/Characterization

 $This information \ must be provided \ to \ the \ appropriate \ district \ of fice \ no \ later \ than \ 90 \ days \ after \ the \ release \ discovery \ date.$

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 date		
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? 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? Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? Are the lateral extents of the release within 300 feet of a wetland? Are the lateral extents of the release overlying a subsurface mine? Are the lateral extents of the release overlying an unstable area such as karst geology? Are the lateral extents of the release within a 100-year floodplain? Did the release impact areas not on an exploration, development, production, or storage site? 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.	What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>110 (</u> ft bgs)
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)? Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? 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? Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? Are the lateral extents of the release within 300 feet of a wetland? Are the lateral extents of the release within 300 feet of a wetland? Are the lateral extents of the release overlying a subsurface mine? Are the lateral extents of the release overlying an unstable area such as karst geology? Are the lateral extents of the release overlying an unstable area such as karst geology? Are the lateral extents of the release within a 100-year floodplain? Did the release impact areas not on an exploration, development, production, or storage site? 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.	Did this release impact groundwater or surface water?	☐ Yes ⊠ No
ordinary high-water mark)? Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? 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? Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? Are the lateral extents of the release within 300 feet of a wetland? Are the lateral extents of the release overlying a subsurface mine? Are the lateral extents of the release overlying an unstable area such as karst geology? Are the lateral extents of the release within a 100-year floodplain? Did the release impact areas not on an exploration, development, production, or storage site? Wes 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.		☐ Yes ⊠ No
or church? 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? Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? Are the lateral extents of the release within 300 feet of a wetland? Are the lateral extents of the release within 300 feet of a wetland? Are the lateral extents of the release overlying a subsurface mine? Are the lateral extents of the release overlying an unstable area such as karst geology? Are the lateral extents of the release within a 100-year floodplain? Did the release impact areas not on an exploration, development, production, or storage site? 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.	· · · · · · · · · · · · · · · · · · ·	☐ Yes ⊠ No
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water well field? Are the lateral extents of the release within 300 feet of a wetland? Are the lateral extents of the release overlying a subsurface mine? Are the lateral extents of the release overlying an unstable area such as karst geology? Are the lateral extents of the release within a 100-year floodplain? Did the release impact areas not on an exploration, development, production, or storage site? 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.	Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No
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Are the lateral extents of the release within a 100-year floodplain? Did the release impact areas not on an exploration, development, production, or storage site? 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.	Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No
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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.	Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ⊠ No
Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.	Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and ve contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	rtical extents of soil
M Elald data	Characterization Report Checklist: Each of the following items must be included in the report.	
	 ⊠ 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 	lls.

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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regulations all operators are required to report and/or file certain relepublic health or the environment. The acceptance of a C-141 report failed to adequately investigate and remediate contamination that po	te to the best of my knowledge and understand that pursuant to OCD rules and case notifications and perform corrective actions for releases which may endanger by the OCD does not relieve the operator of liability should their operations have se a threat to groundwater, surface water, human health or the environment. In creator of responsibility for compliance with any other federal, state, or local laws
Printed Name: _Garrett Green	Title: _SSHE _Coordinator
Signature: Such Such	Date:_9/28/2023
email: <u>garrett.green@exxonmobil.com</u>	Telephone: _575-200-0 <u>729</u>
OCD Only	
Received by: Shelly Wells	Date: 10/4/2023
·	

State of New Mexico

Incident ID NAPP2319954265

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Application ID	

Closure

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

Closure Report Attachment Checklist: Each of the following items must	st be included in the closure report.
☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAG	
Photographs of the remediated site prior to backfill or photos of the lin must be notified 2 days prior to liner inspection)	ner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate ODC District	office must be notified 2 days prior to final sampling)
□ Description of remediation activities	
I hereby certify that the information given above is true and complete to the and regulations all operators are required to report and/or file certain release may endanger public health or the environment. The acceptance of a C-141 should their operations have failed to adequately investigate and remediate chuman health or the environment. In addition, OCD acceptance of a C-141 compliance with any other federal, state, or local laws and/or regulations. The restore, reclaim, and re-vegetate the impacted surface area to the conditions accordance with 19.15.29.13 NMAC including notification to the OCD when Printed Name: Garrett Green Title: Environment.	notifications and perform corrective actions for releases which report by the OCD does not relieve the operator of liability ontamination that pose a threat to groundwater, surface water, report does not relieve the operator of responsibility for the responsible party acknowledges they must substantially that existed prior to the release or their final land use in
of Man	28/2023
	75-200-072 <u>9</u>
OCD Only	
	Date: <u>10/4/2023</u>
Closure approval by the OCD does not relieve the responsible party of liabili remediate contamination that poses a threat to groundwater, surface water, hu party of compliance with any other federal, state, or local laws and/or regula	man health, or the environment nor does not relieve the responsible
Closure Approved by:	Date:
Printed Name:	Title:



September 28, 2023

New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Closure Request

James Ranch Unit Booster

Incident Number NAPP2319954265

Eddy County, New Mexico

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document assessment, delineation, excavation, and soil sampling activities performed at the James Ranch Unit Booster (Site). The purpose of the Site assessment, delineation, excavation, and soil sampling activities was to address impacts to soil resulting from a release of produced water at the Site. Based on excavation activities and laboratory analytical results from the soil sampling events, XTO is submitting this *Closure Request*, describing remedial actions that have occurred and requesting closure for Incident Number NAPP2319954265.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit E, Section 30, Township 21 South, Range 30 East, in Eddy County, New Mexico (32.45072°, -103.92541°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On July 5, 2023, a gasket on a temporary water transfer pump suction vacuum chamber failed, resulting in the release of 15.08 barrels (bbls) of produced water onto the ground surface of a right-of-way (ROW) and pasture area. Fluids on the ground surface were not able to be recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on July 18, 2023. The release was assigned Incident Number NAPP2319954265.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest permitted groundwater well with depth to groundwater data are United States Geological Survey (USGS) wells 322642103555001 and 322641103554901. Both wells are located approximately 0.5 miles southwest of the Site, positioned next to each other, and were drilled to a total depth of 220 feet and 210 feet bgs, respectively. Both groundwater wells have a reported depth to groundwater of 185 feet bgs; however, the last depth to groundwater recorded for these wells exceed 25 years in age.

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 3122 National Park Highway | Carlsbad, NM 88220 | ensolum.com

XTO Energy, Inc Closure Request James Ranch Unit Booster



The next closest permitted ground water well is New Mexico Office of the State Engineer (OSE) groundwater well C-04374. OSE well C-04374 is located just outside of the USGS wells, approximately 0.53 mile southwest of the Site. The groundwater well has a reported depth to groundwater of 194 feet bgs and a total depth of 245 feet bgs, which corroborates the depth to groundwater in this region and reasonably estimates the depth to groundwater related to this Site. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent dry wash, located approximately 333 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). All potential Site receptors are presented on Figure 1.

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

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

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

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On July 31, 2023, Site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. Seven delineation soil samples (SS01 through SS07) were collected at a depth of 0.5 feet bgs to assess the extent of the release. Soil samples SS01 through SS03 were collected within the release area and soil samples SS04 through SS07 were collected outside the release area to confirm the lateral extent of the release. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH- GRO, TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Soil samples delivered to the laboratory the same day they were collected may not have equilibrated to 6 degrees Celsius required for shipment and long term storage but are considered to have been received in acceptable condition by the laboratory.

XTO Energy, Inc Closure Request James Ranch Unit Booster



Laboratory analytical results for delineation soil samples SS01 through SS03 indicated chloride and TPH concentrations exceeded the Closure Criteria and/or reclamation requirement. Based on laboratory analytical results for soil samples SS01 through SS03, additional delineation and excavation activities were warranted.

DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

On August 24, 2023, Ensolum personnel returned to the Site to oversee delineation and excavation activities. Three boreholes (BH01 through BH03) were advanced via hand auger within the release extent to assess the vertical extent of impacted soil. The boreholes were advanced to depths ranging from 1-foot to 4 feet bgs. Discrete soil samples were collected at the terminal depths of each borehole at depths ranging from 1-foot to 4 feet bgs. Soil from the boreholes were field screened as described above. Field screening results and observations for all boreholes were logged on lithologic soil sampling logs, which are included in Appendix B. All boreholes and delineation soil sample locations are depicted on Figure 3.

Impacted soil was excavated from the release area as indicated by delineation field screening results and laboratory analytical results. Excavation activities were performed utilizing heavy equipment and transport vehicles. The excavation occurred on the ROW and on the edge of a pasture area. To direct excavation activities, soil was screened as described above. The excavation was completed to depths ranging from 1-foot to 4 feet bgs. Photographic documentation of the excavation activities is included in Appendix C.

Following removal of the impacted soil, 5-point composite soil samples were collected at least every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW07 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. Composite soil samples FS01 through FS21 were collected from the floor of the excavation at depths ranging from 1-foot to 4 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

The excavation area measured approximately 3,462 square feet. A total of approximately 407 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Facility located in Hobbs, New Mexico.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for boreholes BH01 through BH03 and all final confirmation soil samples collected from the final excavation extent were compliant with the Closure Criteria and and/or the reclamation requirement within the top 4 feet of the ROW and pasture area. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix D.

CLOSURE REQUEST

Site assessment, delineation, and excavation activities were conducted at the Site to address the July 2023 release of produced water. Laboratory analytical results for all excavation soil samples collected from the final excavation extent indicated all COC concentrations were compliant with the Site Closure Criteria and/or the reclamation requirement. Based on the soil sample analytical results, no further remediation was required. XTO backfilled the excavation on September 8, 2023, with material purchased

XTO Energy, Inc Closure Request James Ranch Unit Booster



locally and recontoured the Site to match pre-existing Site conditions. The pasture area affected by the release will be reseeded with an approved BLM seed mixture.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2319954265.

If you have any questions or comments, please contact Mr. Benjamin Belill at (989) 854-0852 or bbelill@ensolum.com.

Sincerely, **Ensolum**, **LLC**



Mariaha O'Dell Staff Geologist

cc: Garrett Green, XTO Tommee Lambert, XTO

BLM

Daniel R. Moir, PG Senior Managing Geologist

Appendices:

Figure 1 Site Location Map

Figure 2 Delineation Soil Sample Locations
Figure 3 Excavation Soil Sample Locations
Table 1 Soil Sample Analytical Results
Appendix A Appendix B Lithologic Soil Sampling Logs

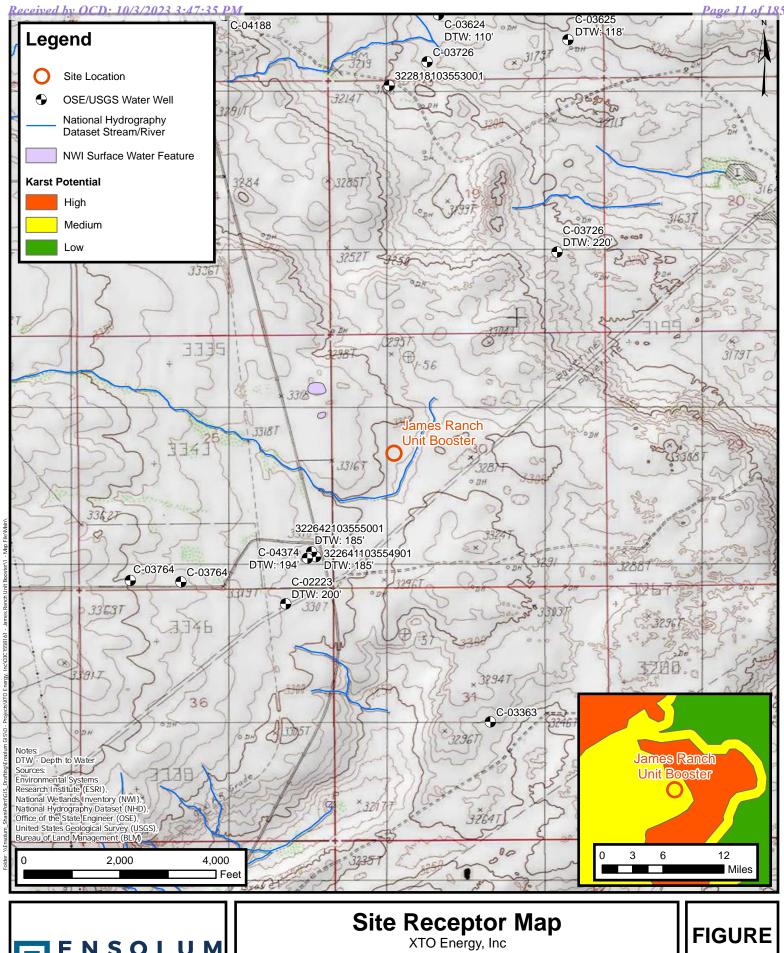
Appendix C Photographic Log

Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation

Appendix E NMOCD Correspondence



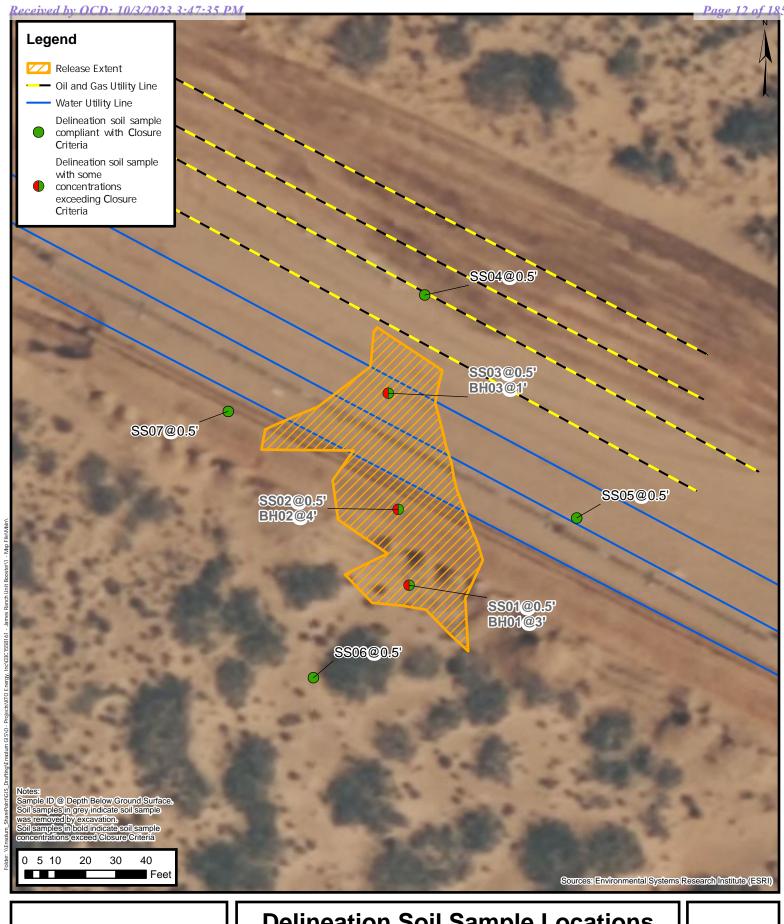
FIGURES





James Ranch Unit Booster Incident Number: NAPP2319954265 Unit E, Sec 30, T21S, R30E Eddy County, NM

Released to Imaging: 2/16/2024 2:53:04



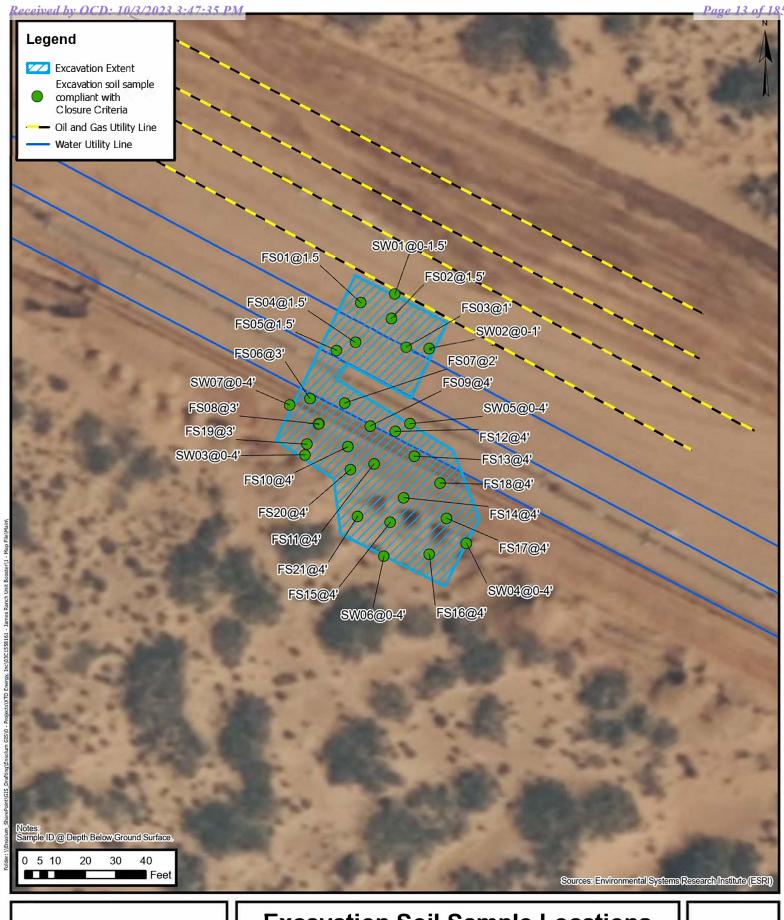


Delineation Soil Sample Locations

XTO Energy, Inc James Ranch Unit Booster Incident Number: NAPP2319954265 Unit E, Sec 30, T21S, R30E Eddy County, NM

FIGURE 2

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Excavation Soil Sample LocationsXTO Energy, Inc

XTO Energy, Inc James Ranch Unit Booster Incident Number: NAPP2319954265 Unit E, Sec 30, T21S, R30E Eddy County, NM FIGURE 3

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TABLES



TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS James Ranch Unit Booster XTO Energy, Inc Eddy County, New Mexico

Sample I.D.	Sample	Sample Depth	Benzene	Total BTEX	TPH GRO	TPH DRO	TPH ORO	GRO+DRO	Total TPH	Chloride
	Date	(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMOCD Table I Cl	losure Criteria (NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
				Deli	neation Soil Sa	mples				
\$\$01	07/31/2023	0.5	<0.00200	<0.00399	< 50.3	195	< 50.3	195	195	16,900
BH01	08/24/2023	3	<0.00198	<0.00397	<49.8	<49.8	<4 9.8	<49.8	<49.8	474
\$\$02	07/31/2023	0.5	<0.00198	<0.00397	< 50.3	377	< 50.3	377	377	34,300
BH02	08/24/2023	4	<0.00201	<0.00402	< 50.2	396				
SS03	07/31/2023	0.5	<0.00202	<0.00403	<50.4	<50.4	< 50.4	< 50.4	<50.4	23,300
BH03	08/24/2023	4	<0.00201	<0.00402	<50.4	<50.4	< 50.4	< 50.4	<50.4	99.0
SS04	07/31/2023	0.5	<0.00201	<0.00402	<50.5	<50.5	<50.5	<50.5	<50.5	437
SS05	07/31/2023	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	104
SS06	07/31/2023	0.5	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	97.7
SS07	07/31/2023	0.5	<0.00200	<0.00400	<50.2	<50.2	<50.2	<50.2	<50.2	251
				Confi	irmation Soil Sa	amples				
FS01	08/25/2023	1.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	531
FS02	08/25/2023	1.5	<0.00198	<0.00397	<50.5	<50.5	<50.5	<50.5	<50.5	446
FS03	08/25/2023	1	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	173
FS04	08/25/2023	1.5	<0.00198	<0.00396	<49.6	<49.6	<49.6	<49.6	<49.6	132
FS05	08/28/2023	1.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	212
FS06	08/28/2023	3	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	124
FS07	08/28/2023	2	<0.00202	<0.00404	<50.5	<50.5	<50.5	<50.5	<50.5	274
FS08	08/28/2023	3	<0.00201	<0.00402	<50.1	<50.1	<50.1	<50.1	<50.1	137
FS09	08/29/2023	4	<0.00198	<0.00396	<50.1	<50.1	<50.1	<50.1	<50.1	915
FS10	08/29/2023	4	<0.00202	<0.00403	<50.4	<50.4	<50.4	<50.4	<50.4	327
FS11	08/29/2023	4	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	1,270
FS12	08/29/2023	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	202
FS13	08/29/2023	4	<0.00201	<0.00402	<50.1	<50.1	<50.1	<50.1	<50.1	403
FS14	08/29/2023	4	<0.00202	<0.00403	<50.4	<50.4	<50.4	<50.4	<50.4	1,800
FS15	08/29/2023	4	<0.00198	<0.00396	<49.7	<49.7	<49.7	<49.7	<49.7	366
FS16	08/29/2023	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	1,430
FS17	08/29/2023	4	<0.00198	<0.00397	<49.7	<49.7	<49.7	<49.7	<49.7	1,220
FS18	08/29/2023	4	<0.00202	<0.00404	<50.3	<50.3	<50.3	<50.3	<50.3	152
FS19	08/29/2023	3	<0.00198	<0.00396	<50.5	<50.5	<50.5	<50.5	<50.5	252
FS20	08/29/2023	4	<0.00201	<0.00402	<49.5	<49.5	<49.5	<49.5	<49.5	277

Ensolum 1 of 2



TABLE 1 **SOIL SAMPLE ANALYTICAL RESULTS James Ranch Unit Booster** XTO Energy, Inc **Eddy 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 Cl	losure Criteria (I	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
FS21	08/29/2023	4	<0.00202	<0.00403	<50.2	<50.2	<50.2	<50.2	<50.2	108
SW01	08/25/2023	0 - 1.5	<0.00198	<0.00396	<50.3	<50.3	<50.3	<50.3	<50.3	105
SW02	08/25/2023	0 - 1	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	124
SW03	08/29/2023	0 - 4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	69.7
SW04	08/29/2023	0 - 4	<0.00202	<0.00404	<49.6	<49.6	<49.6	<49.6	<49.6	265
SW05	08/29/2023	0 - 4	<0.00201	<0.00402	<50.4	<50.4	<50.4	<50.4	<50.4	244
SW06	08/29/2023	0 - 4	<0.00200	<0.00400	<50.2	<50.2	<50.2	<50.2	<50.2	123
SW07	08/29/2023	0 - 4	<0.00199	<0.00398	<50.3	<50.3	<50.3	<50.3	<50.3	93.6

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation

requirement where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities

2 of 2 **Ensolum**



APPENDIX A

Referenced Well Records



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us



2019 DEC 26 AM 9: 38

Γ								:								
_	OSE POD NO). (WELL	NO.)			WELL TAG ID NO. 2248C				OSE FILE NO	S).					
Į.						22480			4							
AND WELL LOCATION	WELL OWN Don Watts		E(S)							PHONE (OPTI	ONAL)					
9			DIG - DDDDEGG						4							
ELL	PO BOX 2		ING ADDRESS							CITY Loving			STATE NM	88256	ZIP	
X									1							
	WELL				REES 32	minutes 26	SECON 41.1	1		* ACCURACY	ВЕОТПВ	ED. ONE TENE	TU OE A CI	ECONTS.		
3	LOCATIO (FROM GP		LATITUDE		-			N	4	* DATUM REC	-		inur a si	ECOND		
GENERAL	(FROM GF	[3)	LONGITUDE	i	103	55	52.8	30 W		DATOM REC						
	1		TING WELL LOCAT		TREET ADDR	ESS AND COMMON	LANDM/	ARKS PL	SS	(SECTION, TO	WNSHJII	, RANGE) WH	ERE AVAI	LABLE		
T.	1655 Potas	sh Mine	s Rd, Carlsbad N	m												
=	LICENSE NO).	NAME OF LICI	NSED D	RILLER						NAME	OF WELL DR	ILLING CO	MPANY		
	WD1	058				GARY KEY					KE	Y'S DRILLI	NG & PU	MP SERVI	CE, INC	
	DRILLING S	TARTED	DRILLING ENT	DED I	DEPTH OF CO	MPLETED WELL (F	1)	BORE HO	OL	E DEPTH (FT)	DEPTI	WATER FIR	ST ENCOU	NTERED (FT)	
1	12/3.	/19	12/4/19			245			2	45			194			
1	COMPLETE		S: ARTESIA	t	DRY HOL	E SHALLO	W (Inico)	ADETRA DE L'AN			STATI	C WATER LEV		MPLETED WI	ELL (FT)	
Z	COMILETES		s. [AKIESIA		DKI INCL	E [E. SHALIO		NPINED)			<u> </u>		194			
ATI	DRILLING FI	LUID:	✓ AIR		MUD	ADDITIV	ES - SPEC	TFY:								
CASING INFORMATION	DRILLING M	ETHOD:	ROTARY		HAMMER	CABLE T	00L	∏ отн	ER	- SPECIFY:						
NFO.	DEPTH	feet bgl	BORE HO	TE	CASING 1	MATERIAL AND	O/OR					ASING	CAGD	77.171.71	T	
lG II	FROM TO		BOKE IK			GRADE	_			SING ECTION	l -	DE DIAM.		IG WALL CKNESS	SLOT SIZE	
VISIV			(inches)		ach casing string, ections of screen)				YPE ng diameter)	(i	nches)	(ir	nches)	(inches)	
& C	-1.5	20	12-3/4	,		STEEL		(8"		250		
9g	-1.5	205	7-7/8"			PVC		S	ΡI	LINE		1-1/2"	SCH 40			
TT	205	245	7-7/8"			PVC		S	PI	PLINE 4-1/2"			SC	CH 40	.032	
DRILLING					-											
77											<u></u>					
					_											
						 .									<u> </u>	
				-											 	
													I		<u> </u>	
ب	DEPTH	(feet bgl)	BORE HO DIAM. (inc		· ·	ST ANNULAR SE VEL PACK SIZE-						AMOUNT		METHO PLACEN		
ANNULAR MATERIAL	FROM	ТО			GKA			BYINI	er	CVAL	<u> </u>	(cubic feet)				
TE	0	20	12-3/4"		_		MENT GRAVEL							HAND HAND		
M.	20	245	1-1/8			PEAC	IKAVEL					· · · · · · · · · · · · · · · · · · ·		HAN	עוּ	
LAR		_										<u> </u>				
IND		_											_			
3. A.					-											
										<u>. </u>					····	
FOR	OSE INTERI	NAL US	7.6			POD NO	<u> </u>	•		WR-20		RECORD		ersion 06/3	0/17)	
	<u> </u>	73	140.		11 00			1			······	204/0		PAGE	1 OF 2	
LUC	ATION 撁	Oh	y run	لم	1. 21	. 25.44	7		Ų	VELL TAG II	JNU.	2248		LEAUE	LULZ	

	DEPTH (feet bgl)	THICKNESS	co	LOR ANI	TYPE OF M	IATERIAL E	NCOU	VTERED -		1	ATER	ESTIMATED YIELD FOR
	FROM	то	(feet)			R-BEARING plemental sho			CTURE ZONE	ES		RING? 5 / NO)	WATER- BEARING ZONES (gpm)
	0	5	5			TC	P SOIL				Y	√ N	
	5	12	7			CA	LECHIE				Y	√ N	
	12	220	208			RED CL	AY & SAND)			√ Y	N	5.00
	220	243	23			RED SA	ANDSTONE				√ Y	N	25.00
	243	245	2			BRO'	WN CLAY	_			Y	✓ N	
<u>ب</u>		- "					•	_			Y	N	
WEL											Y	N	
OF								<u>.</u>			Y	N	
ĐQ.											Y	N	
IC I				47				_			Y	N	
507						в			11.T.T. 11		Y	N	
EO								_			Y	N	
80											Y	N	
HYDROGEOLOGIC LOG OF WELL											Y	N	
4			1					Yes			Y	N	
			<u> </u>								Y	N	
			 								Y	N	
											Y	N	
						-				_	Y	N	
			†		<u> </u>				40		Y	N	
			 		<u></u>						Y	N	
	METHOD U	SED TO ES	STIMATE YIELD	OF WATER-E	BEARING	STRATA:		t there are	••	ТОТ	AL ESTI	MATED	h
	PUMI	P ZA	IR LIFT	BAILER	Поті	HER – SPECI	FY:		• • • •	WEI	L YIEL	30.00	
Z C	WELL TES		RESULTS - ATTA T TIME, END TIM										
TEST; RIG SUPERVISION	MISCELLA	NEOUS IN	FORMATION: IN	ISTALLED I	PERMAN	IENT PUM	P @ 25GPM						
UPE							0						
IG S													
T; R													
TES	PRINT NAM	ME(S) OF D	RILL RIG SUPER	VISOR(S) TH	AT PROV	IDED ONSI	TE SUPERVI	SION O	F WELL CON	ISTRU	CTION (THER T	HAN LICENSEE:
wi	CASEY KE	Y											
	THE UNDE	RSIGNED]	PREBY CERTH	ES THAT, TO	THE BE	ST OF HIS	OR HER KNO	OWLED	GE AND BEI	LIEF, T	HE FOR	EGOING	IS A TRUE AND
JRE	CORRECT I	RECORD ()	THE ABOVE D LDER WITHIN 3	ESCRIBED H	OLE ANI ER COMP) THAT HE (LETION OF	OR SHE WIL WELL DRIL	L FILE	THIS WELL	RECOR	ED WITE	I THE ST.	ATE ENGINEER
(ATI		W											
SIGNATURE		Hay	Y		G	ARY KEY					12-	24-19	
ý		SIGNAT	URE OF DRILLE	R / PRINTS	SIGNEE N	AME						DATE	
	R OSE INTERI	NAL USE	71/			POD NO			WR-20 WE	LL RE	CORD &	LOG (Ve	rsion 06/30/2017)

POD NO.

21.29.25.444

TRN NO. 640 848

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WELL TAG ID NO. 2248C

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

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Search Results -- 1 sites found

Agency code = usgs

site_no list =

322642103555001

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 322642103555001 21S.29E.25.444111

Table of data

Eddy County, New Mexico Latitude 32°26'42", Longitude 103°55'50" NAD27

Land-surface elevation 3,310 feet above NAVD88

The depth of the well is 220 feet below land surface.

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

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

<u>āb-separat</u>	ed data									
Graph of da	<u>ta</u>									
Reselect pe	<u>riod</u>									
Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measu
1983-01-2	0	D	62610		3122.98	NGVD29	1	Z		
1983-01-2	0	D	62611		3124.60	NAVD88	1	Z		
1983-01-2	0	D	72019	185.40			1	Z		
1988-03-1	7	D	62610		3123.25	NGVD29	1	Z		
1988-03-1	7	D	62611		3124.87	NAVD88	1	Z		
1988-03-1	7	D	72019	185.13			1	Z		
1992-12-0	9	D	62610		3123.02	NGVD29	1	S		
1992-12-0	9	D	62611		3124.64	NAVD88	1	S		
1992-12-0	9	D	72019	185.36			1	S		
1998-01-2	8	D	62610		3122.84	NGVD29	1	S		
1998-01-2	8	D	62611		3124.46	NAVD88	1	S		
1998-01-2	8	D	72019	185.54			1	S		

Exp	lanation

Section Code **Description**

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

<u>Questions or Comments</u> <u>Automated retrievals</u> <u>Help</u> Data Tips Explanation of terms Subscribe for system changes **News**

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Page Contact Information: <u>USGS Water Data Support Team</u> Page Last Modified: 2023-07-31 15:21:32 EDT

0.27 0.24 nadww01





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National Water Information System: Web Interface

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 Data Category:
 Geographic Area:

 Groundwater
 ✓

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■ Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs

site_no list =

• 322641103554901

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 322641103554901 21S.29E.25.444110

Eddy County, New Mexico

Latitude 32°26'41", Longitude 103°55'49" NAD27

Land-surface elevation 3,310 feet above NAVD88

The depth of the well is 210 feet below land surface.

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

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of dat	<u>ta</u>													
ab-separated data														
Graph of data														
Reselect period														
Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur				
1983-01-1	.8	D	62610		3122.78	NGVD29	1	:	<u>7</u>					
1983-01-1	.8	D	62611		3124.40	NAVD88	1	:	7					
1983-01-1	.8	D	72019	185.60			1	:	<u>z</u>					
1987-10-1	.4	D	62610		3122.89	NGVD29	1	:	Z					
1987-10-1	.4	D	62611		3124.51	NAVD88	1		7					
1987-10-1	.4	D	72019	185.49			1	:	Z					

Explanation

Section	Code	Description					
Water-level date-time accuracy	D	Date is accurate to the Day					
Parameter code	62610	Groundwater level above NGVD 1929, feet					
Parameter code	62611 Groundwater level above NAVD 1988, feet						
Parameter code	72019	Depth to water level, feet below land surface					
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988					
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929					

Section	Code	Description						
Status	1	Static						
Method of measurement	Z	Other.						
Measuring agency		Not determined						
Source of measurement		Not determined						
Water-level approval status	Α	Approved for publication Processing and review completed.						

Questions or Comments Automated retrievals <u>Help</u> Data Tips **Explanation of terms** Subscribe for system changes **News**

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Title: Groundwater for USA: Water Levels URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: <u>USGS Water Data Support Team</u> Page Last Modified: 2023-09-27 00:02:17 EDT

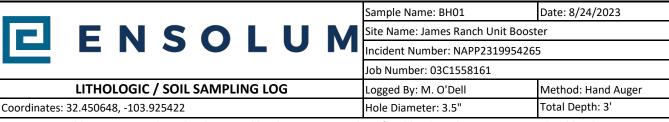
0.49 0.4 nadww01





APPENDIX B

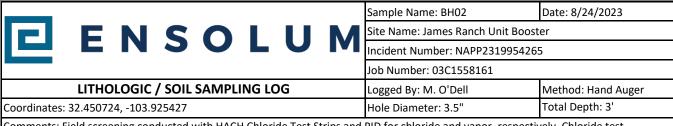
Lithologic Soil Sampling Logs



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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
					1	<u> </u>		
D	26,639	7.2	Υ	SS01	0.5	-		
D	4,945	0	N		1 _	1	SP	Sand. Reddish brown, very fine to fine grained,
					_	<u>-</u>		poorly graded, no odor, dry.
D	1,002	0	N		2 _	2		
					_	- -		
D	302	0	N	BH01	3	3		

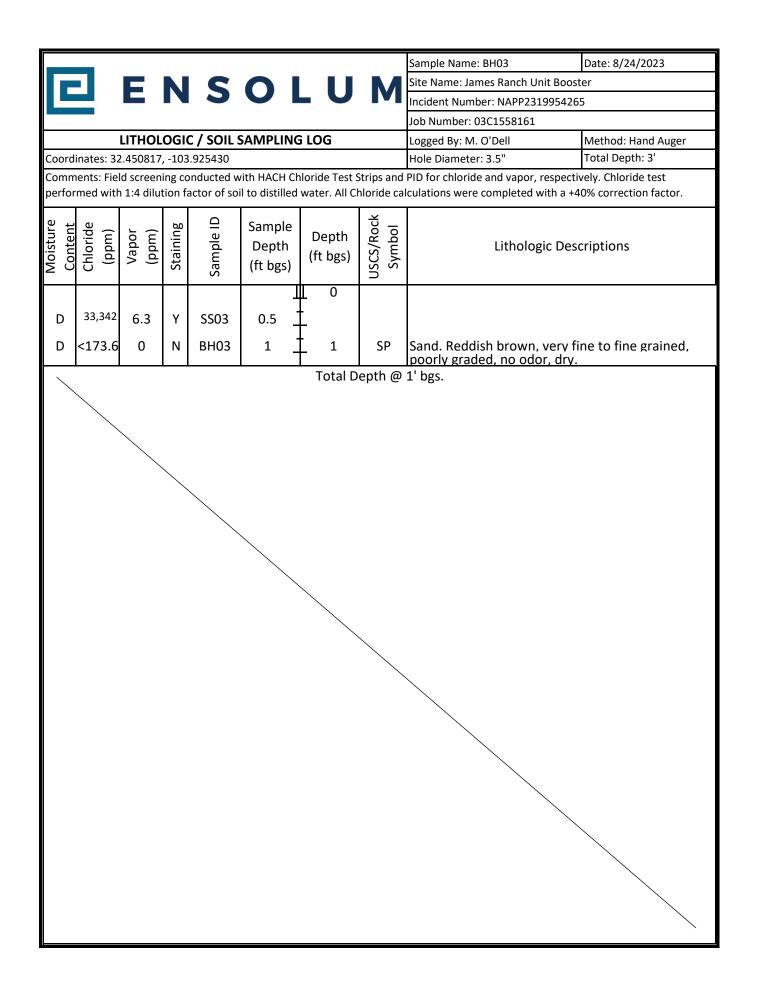
Total Depth @ 3' bgs.



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

Moisture	Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
			_				0		
	D	37,705	10.1	Υ	SS02	0.5	 -		
	D	2,223	0	N		1 _	1	SP	Sand. Reddish brown, very fine to fine grained, poorly graded, no odor, dry.
	D	1,271	0	N		2	2		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
						- -	<u>-</u>		
	D	633	0	N		3 _	3		
	D	<173.6	0	N	BH02	4	4		

Total Depth @ 4' bgs.





APPENDIX C

Photographic Log



Photographic Log
XTO Energy, Inc
James Ranch Unit Booster
Incident Number: NAPP2319954265





Photograph 1 Date: 07/31/2023
Description: Site assessment activities, release extent.
View: West

Photograph 2 Date: 07/31/2023 Description: Site assessment activities, release extent.

View: West





Photograph 3 Date: 08/29/2023

Photograph 4 Date: 08/29/2023

Description: Final excavation extent

View: Southeast

Description: Excavation activities.

View: Southwest



Photographic Log XTO Energy, Inc James Ranch Unit Booster Incident Number: NAPP2319954265



Photograph 5 Date: 09/08/2023

Description: Excavation backfilled.

View: Southeast



Photograph 6 Date: 09/08/2023

Description: Excavation backfilled.

View: East



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701

Generated 8/15/2023 1:08:42 PM

JOB DESCRIPTION

James Ranch Unit Booster SDG NUMBER 03C1558261

JOB NUMBER

890-5013-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

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

Authorization

Generated 8/15/2023 1:08:42 PM

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

Laboratory Job ID: 890-5013-1 Client: Ensolum SDG: 03C1558261 Project/Site: James Ranch Unit Booster

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Definitions/Glossary

Job ID: 890-5013-1 Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558261

Qualifiers

GC VOA

Qualifier **Qualifier Description** LCS and/or LCSD is outside acceptance limits, high biased. 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** LCS and/or LCSD is outside acceptance 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 Contains No Free Liquid **CNF** DER

Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

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

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Method Detection Limit MDL ML Minimum Level (Dioxin) MPN Most Probable Number MOI Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit PQL

PRES Presumptive **Quality Control** QC

Relative Error Ratio (Radiochemistry) **RER**

Reporting Limit or Requested Limit (Radiochemistry) RL

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

Toxicity Equivalent Factor (Dioxin) TEF Toxicity Equivalent Quotient (Dioxin) **TEQ**

TNTC Too Numerous To Count

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Case Narrative

Client: Ensolum

Project/Site: James Ranch Unit Booster

Job ID: 890-5013-1

SDG: 03C1558261

Job ID: 890-5013-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5013-1

Receipt

The samples were received on 7/31/2023 1:55 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-5013-1), SS02 (890-5013-2), SS03 (890-5013-3), SS04 (890-5013-4), SS05 (890-5013-5), SS06 (890-5013-6) and SS07 (890-5013-7).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS02 (890-5013-2), SS04 (890-5013-4), SS05 (890-5013-5), SS06 (890-5013-6), SS07 (890-5013-7), (CCV 880-59604/2), (CCV 880-59604/20), (LCS 880-59609/1-A), (LCSD 880-59609/2-A), (MB 880-59609/5-A), (890-5013-A-2-C MS) and (890-5013-A-2-D MSD). Evidence of matrix interferences is not obvious.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-59604 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-59604/20).

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 laboratory control sample (LCS) associated with preparation batch 880-59649 and analytical batch 880-59688 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8015MOD NM: The continuing calibration verification (CCV) associated with batch 880-59688 recovered above the upper control limit for Diesel Range Organics (Over C10-C28). An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-59688/31).

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

HPLC/IC

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

Matrix: Solid

Lab Sample ID: 890-5013-1

Job ID: 890-5013-1

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558261

Client Sample ID: SS01 Date Collected: 07/31/23 10:15 Date Received: 07/31/23 13:55

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/07/23 14:10	08/08/23 02:17	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/07/23 14:10	08/08/23 02:17	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/07/23 14:10	08/08/23 02:17	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399	mg/Kg		08/07/23 14:10	08/08/23 02:17	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/07/23 14:10	08/08/23 02:17	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		08/07/23 14:10	08/08/23 02:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	57	S1-	70 - 130			08/07/23 14:10	08/08/23 02:17	1
1,4-Difluorobenzene (Surr)	112		70 - 130			08/07/23 14:10	08/08/23 02:17	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			08/15/23 10:44	1
: Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (
Analyte	Result	ics (DRO) (GC)	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Analyte			GC)		<u>D</u>	Prepared		Dil Fac
Analyte Total TPH	Result 195	Qualifier	GC) RL 50.3	Unit	<u>D</u>	Prepared	Analyzed	
	Result 195 sel Range Orga	Qualifier	GC) RL 50.3	Unit	D	Prepared Prepared	Analyzed	
Analyte Total TPH Method: SW846 8015B NM - Dies	Result 195 sel Range Orga	Qualifier nics (DRO) Qualifier	RL 50.3	Unit mg/Kg	_ =		Analyzed 08/09/23 18:21	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result 195 sel Range Orga Result	Qualifier nics (DRO) Qualifier	GC) RL 50.3 (GC) RL	Unit mg/Kg	_ =	Prepared	Analyzed 08/09/23 18:21 Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 195 sel Range Orga Result < 50.3	Qualifier nics (DRO) Qualifier U *-	GC) RL 50.3 (GC) RL 50.3	Unit mg/Kg Unit mg/Kg	_ =	Prepared 08/08/23 15:08	Analyzed 08/09/23 18:21 Analyzed 08/09/23 10:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result 195 sel Range Orga Result <50.3	Qualifier nics (DRO) Qualifier U *-	GC) RL 50.3 (GC) RL 50.3 50.3	Unit mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 08/08/23 15:08 08/08/23 15:08	Analyzed 08/09/23 18:21 Analyzed 08/09/23 10:25 08/09/23 10:25	1 Dil Fac 1 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result 195	Qualifier nics (DRO) Qualifier U *-	GC) RL 50.3 (GC) RL 50.3 50.3 50.3	Unit mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 08/08/23 15:08 08/08/23 15:08 08/08/23 15:08	Analyzed 08/09/23 18:21 Analyzed 08/09/23 10:25 08/09/23 10:25	1 Dil Fac 1 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result 195	Qualifier nics (DRO) Qualifier U *-	GC) RL 50.3 (GC) RL 50.3 50.3 Limits	Unit mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 08/08/23 15:08 08/08/23 15:08 08/08/23 15:08 Prepared	Analyzed 08/09/23 18:21 Analyzed 08/09/23 10:25 08/09/23 10:25 Analyzed	Dil Fac 1 1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result 195	Qualifier nics (DRO) Qualifier U*-	GC) RL 50.3 (GC) RL 50.3 50.3 50.3 Limits 70 - 130 70 - 130	Unit mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 08/08/23 15:08 08/08/23 15:08 08/08/23 15:08 Prepared 08/08/23 15:08	Analyzed 08/09/23 18:21 Analyzed 08/09/23 10:25 08/09/23 10:25 Analyzed 08/09/23 10:25	1 Dil Fac 1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result 195	Qualifier nics (DRO) Qualifier U*-	GC) RL 50.3 (GC) RL 50.3 50.3 50.3 Limits 70 - 130 70 - 130	Unit mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 08/08/23 15:08 08/08/23 15:08 08/08/23 15:08 Prepared 08/08/23 15:08	Analyzed 08/09/23 18:21 Analyzed 08/09/23 10:25 08/09/23 10:25 Analyzed 08/09/23 10:25	1 Dil Fac 1 Dil Fac 1

Client Sample ID: SS02 Lab Sample ID: 890-5013-2

Date Collected: 07/31/23 10:20 Date Received: 07/31/23 13:55

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		08/08/23 09:29	08/08/23 12:23	1
Toluene	<0.00198	U	0.00198	mg/Kg		08/08/23 09:29	08/08/23 12:23	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		08/08/23 09:29	08/08/23 12:23	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		08/08/23 09:29	08/08/23 12:23	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		08/08/23 09:29	08/08/23 12:23	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		08/08/23 09:29	08/08/23 12:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)		S1-	70 - 130			08/08/23 09:29	08/08/23 12:23	1

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Matrix: Solid

Sample Depth: 0.5

Job ID: 890-5013-1

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558261

Client Sample ID: SS02 Lab Sample ID: 890-5013-2

Date Collected: 07/31/23 10:20 Matrix: Solid Date Received: 07/31/23 13:55

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

Surrogate	%Recovery Qualifie	r Limits	Prepared	Analyzed	Dil Fac
1 4-Difluorobenzene (Surr)	116	70 - 130	08/08/23 09:29	08/08/23 12:23	

Method: TAL SOP Total BTEX - Tot	al BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			08/09/23 14:09	1

Method: SW846 8015 NM - Diesel Ran	• • • • • •						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	377	50.3	mg/Kg			08/10/23 10:27	1

Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U *-	50.3	mg/Kg		08/08/23 15:08	08/09/23 15:38	1
Diesel Range Organics (Over C10-C28)	377		50.3	mg/Kg		08/08/23 15:08	08/09/23 15:38	1
Oll Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		08/08/23 15:08	08/09/23 15:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Juniogato	fortecovery qualifier	Limito	. repu	- Cu	rinaryzou	D ao
1-Chlorooctane	81	70 - 130	08/08/23	15:08 08.	/09/23 15:38	1
o-Terphenyl	84	70 - 130	08/08/23	15:08 08	/09/23 15:38	1

Method: EPA 300.0 - Anions, Ion C	hromatography - Soluble						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34300	250	mg/Kg			08/03/23 02:33	50

Client Sample ID: SS03 Lab Sample ID: 890-5013-3

Date Collected: 07/31/23 10:25 Date Received: 07/31/23 13:55

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		08/08/23 09:29	08/08/23 12:49	1
Toluene	<0.00202	U	0.00202	mg/Kg		08/08/23 09:29	08/08/23 12:49	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		08/08/23 09:29	08/08/23 12:49	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		08/08/23 09:29	08/08/23 12:49	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		08/08/23 09:29	08/08/23 12:49	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		08/08/23 09:29	08/08/23 12:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130			08/08/23 09:29	08/08/23 12:49	1
1,4-Difluorobenzene (Surr)	122		70 - 130			08/08/23 09:29	08/08/23 12:49	1

_ ′ ′								
Method: TAL SOP Total BTEX - Tot	al BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00403	U	0.00403	ma/Ka			08/09/23 14:09	1

Method: SW846 8015 NM - Diesel F	Range Organics (DRO) (GO	C)				Analyzed	
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4 U	50.4	ma/Ka			08/10/23 10:27	

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Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-5013-3

Client Sample Results

Client: Ensolum Job ID: 890-5013-1 Project/Site: James Ranch Unit Booster SDG: 03C1558261

Client Sample ID: SS03

Date Collected: 07/31/23 10:25 Date Received: 07/31/23 13:55

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.4	U *-	50.4	mg/Kg		08/08/23 15:08	08/09/23 16:29	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.4	U	50.4	mg/Kg		08/08/23 15:08	08/09/23 16:29	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		08/08/23 15:08	08/09/23 16:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130			08/08/23 15:08	08/09/23 16:29	1
o-Terphenyl	84		70 - 130			08/08/23 15:08	08/09/23 16:29	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: SS04 Lab Sample ID: 890-5013-4 Date Collected: 07/31/23 10:30 Matrix: Solid

Date Received: 07/31/23 13:55

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/08/23 09:29	08/08/23 13:14	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/08/23 09:29	08/08/23 13:14	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/08/23 09:29	08/08/23 13:14	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/08/23 09:29	08/08/23 13:14	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/08/23 09:29	08/08/23 13:14	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/08/23 09:29	08/08/23 13:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	61	S1-	70 - 130			08/08/23 09:29	08/08/23 13:14	1
1,4-Difluorobenzene (Surr)	124		70 - 130			08/08/23 09:29	08/08/23 13:14	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/09/23 14:09	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			08/10/23 10:27	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U *-	50.5	mg/Kg		08/08/23 15:08	08/09/23 16:55	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		08/08/23 15:08	08/09/23 16:55	1
Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		08/08/23 15:08	08/09/23 16:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130			08/08/23 15:08	08/09/23 16:55	1
	81		70 - 130			08/08/23 15:08	08/09/23 16:55	1

Job ID: 890-5013-1

Matrix: Solid

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558261

Client Sample ID: SS04 Lab Sample ID: 890-5013-4 Matrix: Solid

Date Collected: 07/31/23 10:30 Date Received: 07/31/23 13:55

Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Ch	romatograp	hy - Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	437		5.01	mg/Kg			08/03/23 02:45	1

Client Sample ID: SS05 Lab Sample ID: 890-5013-5

Date Collected: 07/31/23 10:35 Date Received: 07/31/23 13:55

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 13:40	
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 13:40	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 13:40	
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		08/08/23 09:29	08/08/23 13:40	
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 13:40	
Kylenes, Total	<0.00401	U	0.00401	mg/Kg		08/08/23 09:29	08/08/23 13:40	•
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	63	S1-	70 - 130			08/08/23 09:29	08/08/23 13:40	-
1,4-Difluorobenzene (Surr)	125		70 - 130			08/08/23 09:29	08/08/23 13:40	
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00401	U	0.00401	mg/Kg			08/09/23 14:09	
Analyte Total TPH	Result <49.9	Qualifier U	RL 49.9	mg/Kg	<u>D</u>	Prepared	Analyzed 08/10/23 10:27	Dil Fa
Method: SW846 8015B NM - Die	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	49.9	mg/Kg		08/08/23 15:08	08/09/23 17:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/08/23 15:08	08/09/23 17:21	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/08/23 15:08	08/09/23 17:21	1
5.1. tal.ige 5. gailles (5.15. 525 555)								
	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Surrogate		Qualifier	<u>Limits</u> 70 - 130			Prepared 08/08/23 15:08	Analyzed 08/09/23 17:21	
Surrogate 1-Chlorooctane o-Terphenyl		Qualifier						
Surrogate 1-Chlorooctane	78 77		70 - 130 70 - 130			08/08/23 15:08	08/09/23 17:21	1
Surrogate 1-Chlorooctane o-Terphenyl	78 77 n Chromatograp		70 - 130 70 - 130	Unit	D	08/08/23 15:08	08/09/23 17:21	Dil Fac

Client Sample Results

Client: Ensolum Job ID: 890-5013-1
Project/Site: James Ranch Unit Booster SDG: 03C1558261

Client Sample ID: SS06 Lab Sample ID: 890-5013-6

Date Collected: 07/31/23 10:40

Date Received: 07/31/23 13:55

Matrix: Solid

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/08/23 09:29	08/08/23 14:06	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/08/23 09:29	08/08/23 14:06	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		08/08/23 09:29	08/08/23 14:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/08/23 09:29	08/08/23 14:06	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		08/08/23 09:29	08/08/23 14:06	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/08/23 09:29	08/08/23 14:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	66	S1-	70 - 130			08/08/23 09:29	08/08/23 14:06	1
1,4-Difluorobenzene (Surr)	123		70 - 130			08/08/23 09:29	08/08/23 14:06	1
- Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/09/23 14:09	1
Method: SW846 8015 NM - Diese	ol Banga Organ	ico (DBO) (CC)					
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
								Diriac
Total TPH	<49.6	U	49.6	mg/Kg			08/10/23 10:27	1
- -			49.6					
• -	sel Range Orga		49.6			Prepared		
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	sel Range Orga	nics (DRO) Qualifier	49.6 (GC)	mg/Kg	<u>D</u>	Prepared 08/08/23 15:08	08/10/23 10:27	1
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	sel Range Orga Result	nics (DRO) Qualifier U *-	49.6 (GC)	mg/Kg	<u>D</u>		08/10/23 10:27 Analyzed	1 Dil Fac
Thethod: SW846 8015B NM - Dies	sel Range Orga Result <49.6	nics (DRO) Qualifier U *-	49.6 (GC) RL 49.6	mg/Kg Unit mg/Kg	<u>D</u>	08/08/23 15:08	08/10/23 10:27 Analyzed 08/09/23 17:46	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	sel Range Orga Result <49.6 <49.6	nics (DRO) Qualifier U *- U	49.6 (GC) RL 49.6 49.6	mg/Kg Unit mg/Kg mg/Kg	<u>D</u>	08/08/23 15:08 08/08/23 15:08	08/10/23 10:27 Analyzed 08/09/23 17:46 08/09/23 17:46	1 Dil Fac 1 1
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	sel Range Orga Result <49.6 <49.6	nics (DRO) Qualifier U *- U	49.6 (GC) RL 49.6 49.6 49.6 49.6	mg/Kg Unit mg/Kg mg/Kg	<u>D</u>	08/08/23 15:08 08/08/23 15:08 08/08/23 15:08	08/10/23 10:27 Analyzed 08/09/23 17:46 08/09/23 17:46	Dil Fac 1 1 Dil Fac Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	sel Range Orga Result <49.6 <49.6 <49.6 %Recovery	nics (DRO) Qualifier U *- U	49.6 RL 49.6 49.6 49.6 Limits	mg/Kg Unit mg/Kg mg/Kg	<u>D</u>	08/08/23 15:08 08/08/23 15:08 08/08/23 15:08 Prepared	08/10/23 10:27 Analyzed 08/09/23 17:46 08/09/23 17:46 08/09/23 17:46 Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	sel Range Orga Result <49.6	nics (DRO) Qualifier U*- U Qualifier	49.6 RL 49.6 49.6 49.6 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg	<u>D</u>	08/08/23 15:08 08/08/23 15:08 08/08/23 15:08 Prepared 08/08/23 15:08	08/10/23 10:27 Analyzed 08/09/23 17:46 08/09/23 17:46 Analyzed 08/09/23 17:46	1 Dil Fac 1
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	sel Range Orga Result <49.6 <49.6 <49.6 **Recovery 72 71 Chromatograp	nics (DRO) Qualifier U*- U Qualifier	49.6 RL 49.6 49.6 49.6 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg	<u>D</u>	08/08/23 15:08 08/08/23 15:08 08/08/23 15:08 Prepared 08/08/23 15:08	08/10/23 10:27 Analyzed 08/09/23 17:46 08/09/23 17:46 Analyzed 08/09/23 17:46	1 Dil Fac 1 1 1 1 Dil Fac 1

Client Sample ID: SS07

Date Collected: 07/31/23 10:45

Lab Sample ID: 890-5013-7

Matrix: Solid

Date Collected: 07/31/23 10:45 Date Received: 07/31/23 13:55

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 14:31	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 14:31	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 14:31	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/08/23 09:29	08/08/23 14:31	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 14:31	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/08/23 09:29	08/08/23 14:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75		70 - 130			08/08/23 09:29	08/08/23 14:31	

Client Sample Results

Client: Ensolum Job ID: 890-5013-1
Project/Site: James Ranch Unit Booster SDG: 03C1558261

Client Sample ID: SS07

Date Collected: 07/31/23 10:45

251

Lab Sample ID: 890-5013-7

08/03/23 03:16

Matrix: Solid

Date Received: 07/31/23 13:55 Sample Depth: 0.5

Chloride

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
,4-Difluorobenzene (Surr)	134	S1+	70 - 130			08/08/23 09:29	08/08/23 14:31	1
Method: TAL SOP Total BTEX -	Total BTEX Cald	culation						
analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
otal BTEX	<0.00400	U	0.00400	mg/Kg			08/09/23 14:09	1
Method: SW846 8015 NM - Dies	el Range Organ	ics (DRO) (GC)					
analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
otal TPH	<50.2	U	50.2	mg/Kg			08/10/23 10:27	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8015B NM - Die	sel Range Orga	nics (DRO)	(GC)					
Sasoline Range Organics	<50.2	U *-	50.2	mg/Kg		08/08/23 15:08	08/09/23 18:10	1
GRO)-C6-C10 Diesel Range Organics (Over	<50.2	11	50.2	mg/Kg		08/08/23 15:08	08/09/23 18:10	1
C10-C28)	\00.2	O	30.2	mg/rtg		00/00/23 13:00	00/09/23 10:10	'
Oll Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		08/08/23 15:08	08/09/23 18:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
-Chlorooctane	72		70 - 130			08/08/23 15:08	08/09/23 18:10	1
-Terphenyl	71		70 - 130			08/08/23 15:08	08/09/23 18:10	1

5.02

mg/Kg

Surrogate Summary

Client: Ensolum Job ID: 890-5013-1
Project/Site: James Ranch Unit Booster SDG: 03C1558261

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

BFB1 DFBZ1	Sample ID Client Sample ID (70-130) (70-130) 013-1 SS01 57 S1- 112
SSO1	013-1 SS01 57 S1- 112
\$\text{90-5013-1 MS}\$ \$\text{SS01}\$ \$\text{55 S1-}\$ \$112 \$\text{90-5013-1 MSD}\$ \$\text{SS02}\$ \$\text{56 S1-}\$ \$116 \$\text{90-5013-2 MS}\$ \$\text{SS02}\$ \$\text{56 S1-}\$ \$116 \$\text{90-5013-2 MS}\$ \$\text{SS02}\$ \$\text{53 S1-}\$ \$\text{122}\$ \$\text{90-5013-2 MSD}\$ \$\text{SS02}\$ \$\text{54 S1-}\$ \$\text{113}\$ \$\text{90-5013-3}\$ \$\text{SS03}\$ \$\text{71}\$ \$\text{122}\$ \$\text{90-5013-4}\$ \$\text{SS04}\$ \$\text{61 S1-}\$ \$\text{124}\$ \$\text{90-5013-5}\$ \$\text{SS05}\$ \$\text{63 S1-}\$ \$\text{125}\$ \$\text{90-5013-6}\$ \$\text{SS06}\$ \$\text{66 S1-}\$ \$\text{123}\$ \$\text{90-5013-7}\$ \$\text{SS07}\$ \$\text{75}\$ \$\text{134 S1+}\$ \$\text{CS 880-59521/1-A}\$ \$\text{Lab Control Sample}\$ \$\text{67 S1-}\$ \$\text{133 S1+}\$ \$\text{CSD 880-59521/2-A}\$ \$\text{Lab Control Sample Dup}\$ \$\text{57 S1-}\$ \$\text{112}\$ \$\text{CSD 880-59609/2-A}\$ \$\text{Lab Control Sample Dup}\$ \$\text{60 S1-}\$ \$\text{119}\$ \$\text{880-59463/5-A}\$ \$\text{Method Blank}\$ \$\text{32 S1-}\$ \$\text{98}\$ \$\text{880-59521/5-A}\$ \$\text{Method Blank}\$ \$\text{34 S1-}\$ \$\text{111}\$	
90-5013-1 MSD	012.1 MC CC01 EE C1 112
90-5013-2 SS02 56 S1- 116 90-5013-2 MSD SS02 63 S1- 122 90-5013-3 MSD SS03 71 122 90-5013-3 SS03 71 122 90-5013-4 SS04 61 S1- 124 90-5013-5 SS05 63 S1- 125 90-5013-6 SS06 66 S1- 123 90-5013-7 SS07 75 134 S1+ CS 880-59521/1-A Lab Control Sample 67 S1- 133 S1+ CS 880-59609/1-A Lab Control Sample 58 S1- 126 CSD 880-59521/2-A Lab Control Sample Dup 57 S1- 112 CSD 880-59609/2-A Lab Control Sample Dup 60 S1- 119 B 880-59463/5-A Method Blank 32 S1- 98 B 880-59521/5-A Method Blank 34 S1- 111	013-1 103 5301 55 31- 112
90-5013-2 MSD SS02 54 S1- 122 90-5013-3 SS03 71 122 90-5013-4 SS04 61 S1- 124 90-5013-5 SS05 63 S1- 125 90-5013-6 SS06 66 S1- 123 90-5013-7 SS07 75 134 S1+ CS 880-59521/1-A Lab Control Sample 67 S1- 133 S1+ CS 880-59521/2-A Lab Control Sample Dup 57 S1- 112 CSD 880-59609/2-A Lab Control Sample Dup 60 S1- 119 B 880-59463/5-A Method Blank 32 S1- 98 B 880-59521/5-A Method Blank 34 S1- 111	013-1 MSD SS01 59 S1- 122
90-5013-2 MSD SS02 54 S1- 113 90-5013-3 SS03 71 122 90-5013-4 SS04 61 S1- 124 90-5013-5 SS05 63 S1- 125 90-5013-6 SS06 66 S1- 123 90-5013-7 SS07 75 134 S1+ 90-5013-8 Lab Control Sample 67 S1- 133 S1+ 90-5013-9 Lab Control Sample 58 S1- 126 90-5013-7 Lab Control Sample 58 S1- 126 90-5013-8 Lab Control Sample 58 S1- 126 90-5013-9 Lab Control Sample Dup 57 S1- 112 90-5013-9 Lab Control Sample Dup 60 S1- 119 90-5013-7 Method Blank 32 S1- 98 90-5013-8 Method Blank 34 S1- 111	013-2 SS02 56 S1- 116
90-5013-3 SS03 71 122 90-5013-4 SS04 61 S1- 124 90-5013-5 SS05 63 S1- 125 90-5013-6 SS06 66 S1- 123 90-5013-7 SS07 75 134 S1+ 90-5013-7 SS07 75 134	013-2 MS SS02 63 S1- 122
90-5013-4 SS04 61 S1- 124 90-5013-5 SS05 63 S1- 125 90-5013-6 SS06 66 S1- 123 90-5013-7 SS07 75 134 S1+ CS 880-59521/1-A Lab Control Sample 67 S1- 133 S1+ CS 880-59609/1-A Lab Control Sample 58 S1- 126 CSD 880-59521/2-A Lab Control Sample Dup 57 S1- 112 CSD 880-59609/2-A Lab Control Sample Dup 60 S1- 119 B 880-59463/5-A Method Blank 32 S1- 98 B 880-59521/5-A Method Blank 34 S1- 111	013-2 MSD SS02 54 S1- 113
00-5013-5 SS05 63 S1- 125 00-5013-6 SS06 66 S1- 123 00-5013-7 SS07 75 134 S1+ CS 880-59521/1-A Lab Control Sample 67 S1- 133 S1+ CS 880-59609/1-A Lab Control Sample 58 S1- 126 CSD 880-59521/2-A Lab Control Sample Dup 57 S1- 112 CSD 880-59609/2-A Lab Control Sample Dup 60 S1- 119 B 880-59463/5-A Method Blank 32 S1- 98 B 880-59521/5-A Method Blank 34 S1- 111	013-3 SS03 71 122
90-5013-6 SS06 66 S1- 123 90-5013-7 SS07 75 134 S1+ CS 880-59521/1-A Lab Control Sample 67 S1- 133 S1+ CS 880-59609/1-A Lab Control Sample 58 S1- 126 CSD 880-59521/2-A Lab Control Sample Dup 57 S1- 112 CSD 880-59609/2-A Lab Control Sample Dup 60 S1- 119 B 880-59463/5-A Method Blank 32 S1- 98 B 880-59521/5-A Method Blank 34 S1- 111	013-4 SS04 61 S1- 124
00-5013-7 SS07 75 134 S1+ CS 880-59521/1-A Lab Control Sample 67 S1- 133 S1+ CS 880-59609/1-A Lab Control Sample 58 S1- 126 CSD 880-59521/2-A Lab Control Sample Dup 57 S1- 112 CSD 880-59609/2-A Lab Control Sample Dup 60 S1- 119 B 880-59463/5-A Method Blank 32 S1- 98 B 880-59521/5-A Method Blank 34 S1- 111	013-5 SS05 63 S1- 125
CS 880-59521/1-A Lab Control Sample 67 S1- 133 S1+ CS 880-59609/1-A Lab Control Sample 58 S1- 126 CSD 880-59521/2-A Lab Control Sample Dup 57 S1- 112 CSD 880-59609/2-A Lab Control Sample Dup 60 S1- 119 B 880-59463/5-A Method Blank 32 S1- 98 B 880-59521/5-A Method Blank 34 S1- 111	013-6 SS06 66 S1- 123
CS 880-59609/1-A Lab Control Sample 58 S1- 126 CSD 880-59521/2-A Lab Control Sample Dup 57 S1- 112 CSD 880-59609/2-A Lab Control Sample Dup 60 S1- 119 B 880-59463/5-A Method Blank 32 S1- 98 B 880-59521/5-A Method Blank 34 S1- 111	013-7 SS07 75 134 S1+
CSD 880-59521/2-A Lab Control Sample Dup 57 S1- 112 CSD 880-59609/2-A Lab Control Sample Dup 60 S1- 119 B 880-59463/5-A Method Blank 32 S1- 98 B 880-59521/5-A Method Blank 34 S1- 111	380-59521/1-A Lab Control Sample 67 S1- 133 S1+
CSD 880-59609/2-A Lab Control Sample Dup 60 S1- 119 B 880-59463/5-A Method Blank 32 S1- 98 B 880-59521/5-A Method Blank 34 S1- 111	380-59609/1-A Lab Control Sample 58 S1- 126
B 880-59463/5-A Method Blank 32 S1- 98 B 880-59521/5-A Method Blank 34 S1- 111	9 880-59521/2-A Lab Control Sample Dup 57 S1- 112
B 880-59521/5-A Method Blank 34 S1- 111	9 880-59609/2-A Lab Control Sample Dup 60 S1- 119
	80-59463/5-A Method Blank 32 S1- 98
D 000 50000/5 A Mathed Blad. 00	80-59521/5-A Method Blank 34 S1- 111
B 880-59609/5-A Method Biank 33 51- 92	80-59609/5-A Method Blank 33 S1- 92

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-5013-1	SS01	83	81	
890-5013-1 MS	SS01	84	72	
890-5013-1 MSD	SS01	85	72	
890-5013-2	SS02	81	84	
890-5013-3	SS03	83	84	
890-5013-4	SS04	82	81	
890-5013-5	SS05	78	77	
890-5013-6	SS06	72	71	
890-5013-7	SS07	72	71	
LCS 880-59649/2-A	Lab Control Sample	95	92	
LCSD 880-59649/3-A	Lab Control Sample Dup	86	80	
MB 880-59649/1-A	Method Blank	70	73	

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OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-5013-1 Project/Site: James Ranch Unit Booster SDG: 03C1558261

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-59463/5-A

Lab Sample ID: MB 880-59521/5-A

Matrix: Solid

Analysis Batch: 59419

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 59463

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/07/23 09:51	08/07/23 12:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/07/23 09:51	08/07/23 12:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/07/23 09:51	08/07/23 12:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/07/23 09:51	08/07/23 12:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/07/23 09:51	08/07/23 12:28	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/07/23 09:51	08/07/23 12:28	1

MB MB

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	32	S1-	70 - 130
1.4-Difluorobenzene (Surr)	98		70 ₋ 130

Prepared Analyzed Dil Fac 08/07/23 09:51 08/07/23 12:28 08/07/23 09:51 08/07/23 12:28

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 59521

MR MR Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Benzene <0.00200 U 0.00200 mg/Kg 08/07/23 14:10 08/08/23 01:52 Toluene <0.00200 U 0.00200 mg/Kg 08/07/23 14:10 08/08/23 01:52 Ethylbenzene <0.00200 U 0.00200 mg/Kg 08/07/23 14:10 08/08/23 01:52 <0.00400 U 0.00400 08/07/23 14:10 08/08/23 01:52 m-Xylene & p-Xylene mg/Kg <0.00200 U 0.00200 08/07/23 14:10 08/08/23 01:52 o-Xylene mg/Kg Xylenes, Total <0.00400 U 0.00400 mg/Kg 08/07/23 14:10 08/08/23 01:52

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	34	S1-	70 - 130	08/07/23 14:10	08/08/23 01:52	1
1,4-Difluorobenzene (Surr)	111		70 - 130	08/07/23 14:10	08/08/23 01:52	1

Lab Sample ID: LCS 880-59521/1-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 59419

Analysis Batch: 59419

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

Prep Batch: 59521

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1215		mg/Kg		121	70 - 130	
Toluene	0.100	0.1245		mg/Kg		124	70 - 130	
Ethylbenzene	0.100	0.1276		mg/Kg		128	70 - 130	
m-Xylene & p-Xylene	0.200	0.2647	*+	mg/Kg		132	70 - 130	
o-Xylene	0.100	0.1233		mg/Kg		123	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits		
4-Bromofluorobenzene (Surr)	67	S1-	70 - 130		
1,4-Difluorobenzene (Surr)	133	S1+	70 - 130		

Lab Sample ID: LCSD 880-59521/2-A

Matrix: Solid

Analysis Batch: 59419

Client Sample ID: Lab	Control Sample Dup
	Dren Type, Total/NA

Prep Type: Total/NA

Prep Batch: 59521

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1026		mg/Kg		103	70 - 130	17	35

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QC Sample Results

Client: Ensolum Job ID: 890-5013-1 Project/Site: James Ranch Unit Booster SDG: 03C1558261

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

Lab Sample ID: LCSD 880-59521/2-A

Matrix: Solid

Analysis Batch: 59419

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 59521

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.1077		mg/Kg		108	70 - 130	14	35
Ethylbenzene	0.100	0.1087		mg/Kg		109	70 - 130	16	35
m-Xylene & p-Xylene	0.200	0.2209		mg/Kg		110	70 - 130	18	35
o-Xylene	0.100	0.1052		mg/Kg		105	70 - 130	16	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	57	S1-	70 - 130
1,4-Difluorobenzene (Surr)	112		70 - 130

Lab Sample ID: 890-5013-1 MS

Matrix: Solid

Analysis Batch: 59419

Client Sample ID: SS01 Prep Type: Total/NA

Prep Batch: 59521

Spike MS MS %Rec Sample Sample Result Qualifier Analyte Added Result Qualifier Unit %Rec Limits Benzene <0.00200 0.0996 0.1010 101 70 - 130 mg/Kg Toluene <0.00200 U 0.0996 0.09489 mg/Kg 94 70 - 130 Ethylbenzene <0.00200 U 0.0996 0.09375 mg/Kg 93 70 - 130 0.199 m-Xylene & p-Xylene <0.00399 U*+ 0.1880 94 70 - 130 mg/Kg o-Xylene <0.00200 U 0.0996 0.09642 mg/Kg 70 - 130

MS MS

Surrogate	%Recovery	Qualifier	Limits			
4-Bromofluorobenzene (Surr)	55	S1-	70 - 130			
1.4-Difluorobenzene (Surr)	112		70 - 130			

Lab Sample ID: 890-5013-1 MSD

Matrix: Solid

Analysis Batch: 59419

Client Sample ID: SS01

Prep Type: Total/NA

Prep Batch: 59521

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0994	0.1066		mg/Kg		107	70 - 130	5	35
Toluene	<0.00200	U	0.0994	0.09986		mg/Kg		99	70 - 130	5	35
Ethylbenzene	<0.00200	U	0.0994	0.1038		mg/Kg		104	70 - 130	10	35
m-Xylene & p-Xylene	<0.00399	U *+	0.199	0.2078		mg/Kg		105	70 - 130	10	35
o-Xylene	<0.00200	U	0.0994	0.09398		mg/Kg		95	70 - 130	3	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	59	S1-	70 - 130
1,4-Difluorobenzene (Surr)	122		70 - 130

Lab Sample ID: MB 880-59609/5-A

Matrix: Solid

Analysis Batch: 59604

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 59609

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 11:57	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 11:57	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 11:57	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/08/23 09:29	08/08/23 11:57	1

QC Sample Results

Client: Ensolum Job ID: 890-5013-1 Project/Site: James Ranch Unit Booster SDG: 03C1558261

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

Lab Sample ID: MB 880-59609/5-A

Matrix: Solid

Analysis Batch: 59604

Prep Type: Total/NA

Prep Batch: 59609

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/08/23 09:29	08/08/23 11:57	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/08/23 09:29	08/08/23 11:57	1

MB MB

	INID	IVID				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	33	S1-	70 - 130	08/08/23 09:29	08/08/23 11:57	1
1,4-Difluorobenzene (Surr)	92		70 - 130	08/08/23 09:29	08/08/23 11:57	1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 880-59609/1-A

Lab Sample ID: LCSD 880-59609/2-A

Matrix: Solid

Analysis Batch: 59604

Matrix: Solid Prep Type: Total/NA

Prep Batch: 59609

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1244		mg/Kg		124	70 - 130	
Toluene	0.100	0.1166		mg/Kg		117	70 - 130	
Ethylbenzene	0.100	0.1159		mg/Kg		116	70 - 130	
m-Xylene & p-Xylene	0.200	0.2488		mg/Kg		124	70 - 130	
o-Xylene	0.100	0.1150		mg/Kg		115	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits		
4-Bromofluorobenzene (Surr)	58	S1-	70 - 130		
1.4-Difluorobenzene (Surr)	126		70 - 130		

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 59609 Analysis Batch: 59604

		Spike	LCSD	LCSD				%Rec		RPD	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
	Benzene	0.100	0.1206		mg/Kg		121	70 - 130	3	35	
	Toluene	0.100	0.1120		mg/Kg		112	70 - 130	4	35	
	Ethylbenzene	0.100	0.1140		mg/Kg		114	70 - 130	2	35	
١	m-Xylene & p-Xylene	0.200	0.2406		mg/Kg		120	70 - 130	3	35	
	o-Xylene	0.100	0.1129		mg/Kg		113	70 - 130	2	35	
н											

LCSD LCSD

<0.00198 U

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	60	S1-	70 - 130
1.4-Difluorobenzene (Surr)	119		70 - 130

Lab Sample ID: 890-5013-2 MS Client Sample ID: SS02

Matrix: Solid

o-Xylene

Analysis Batch: 59604

Prep Type: Total/NA Prep Batch: 59609

MS MS Spike %Rec Sample Sample Qualifier Added Result Qualifier Analyte Result Unit %Rec Limits <0.00198 U 0.0996 0.1237 124 Benzene 70 - 130 mg/Kg Toluene <0.00198 U 0.0996 0.1194 mg/Kg 120 70 - 130 0.0996 Ethylbenzene <0.00198 U 0.1192 mg/Kg 119 70 - 130 m-Xylene & p-Xylene <0.00397 U 0.199 0.2516 mg/Kg 126 70 - 130

0.1154

mg/Kg

116

70 - 130

0.0996

Client: Ensolum Project/Site: James Ranch Unit Booster Job ID: 890-5013-1

SDG: 03C1558261

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

Lab Sample ID: 890-5013-2 MS

Matrix: Solid

Analysis Batch: 59604

Client Sample ID: SS02 Prep Type: Total/NA

Prep Batch: 59609

MS MS

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 63 S1-70 - 130 1,4-Difluorobenzene (Surr) 122 70 - 130

Lab Sample ID: 890-5013-2 MSD **Client Sample ID: SS02**

Matrix: Solid

Analysis Batch: 59604

Prep Type: Total/NA Prep Batch: 59609

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit <0.00198 U 0.0990 0.1076 109 70 - 13035 Benzene mg/Kg 14 Toluene <0.00198 U 0.0990 0.1055 mg/Kg 107 70 - 130 12 35 <0.00198 U 0.0990 0.1073 mg/Kg 108 70 - 130 10 35 Ethylbenzene m-Xylene & p-Xylene <0.00397 U 0.198 0.2326 mg/Kg 117 70 - 130 8 35 o-Xylene <0.00198 U 0.0990 0.1003 mg/Kg 101 70 - 130 35 14

MSD MSD

%Recovery Qualifier Limits Surrogate 4-Bromofluorobenzene (Surr) 54 S1-70 - 130 1,4-Difluorobenzene (Surr) 113 70 - 130

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

Lab Sample ID: MB 880-59649/1-A

Matrix: Solid

Analysis Batch: 59688

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 59649

MB MB Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Gasoline Range Organics <50.0 U 50.0 mg/Kg 08/08/23 15:08 08/09/23 07:43 (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg 08/08/23 15:08 08/09/23 07:43 C10-C28) OII Range Organics (Over C28-C36) <50.0 U 50.0 08/08/23 15:08 08/09/23 07:43 mg/Kg

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 70 70 130 08/08/23 15:08 08/09/23 07:43 o-Terphenyl 73 08/08/23 15:08 08/09/23 07:43 70 - 130

Lab Sample ID: LCS 880-59649/2-A

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Matrix: Solid

Analysis Batch: 59688

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 59649

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 682.9 mg/Kg 68 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 846.5 mg/Kg 85 70 - 130

C10-C28)

LCS LCS Qualifier Surrogate %Recovery Limits 1-Chlorooctane 95 70 - 130 92 o-Terphenyl 70 - 130

Client: Ensolum Job ID: 890-5013-1 Project/Site: James Ranch Unit Booster SDG: 03C1558261

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

Lab Sample ID: LCSD 880-59649/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 59688

Prep Type: Total/NA Prep Batch: 59649

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	685.2	*_	mg/Kg		69	70 - 130	0	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	808.7		mg/Kg		81	70 - 130	5	20
C10-C28)									

LCSD LCSD %Recovery Qualifier Limits Surrogate 70 - 130 1-Chlorooctane 86 o-Terphenyl 80 70 - 130

Lab Sample ID: 890-5013-1 MS **Client Sample ID: SS01**

Matrix: Solid

Analysis Batch: 59688

Prep Type: Total/NA

Prep Batch: 59649

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.3	U *-	993	730.9		mg/Kg		74	70 - 130	
Diesel Range Organics (Over C10-C28)	195		993	1030		mg/Kg		84	70 - 130	

	MS MS	
Surrogate	%Recovery Qua	alifier Limits
1-Chlorooctane	84	70 - 130
o-Terphenyl	72	70 - 130

Lab Sample ID: 890-5013-1 MSD **Client Sample ID: SS01**

Matrix: Solid

Analysis Batch: 59688

Prep Type: Total/NA Prep Batch: 59649

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.3	U *-	993	753.7		mg/Kg		76	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	195		993	1046		mg/Kg		86	70 - 130	1	20
	MSD	MSD									

	11.05		
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	72		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-59035/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

RL

5.00

Matrix: Solid

Analyte

Chloride

Analysis Batch: 59124

MB MB

Result Qualifier

<5.00 U

Unit Prepared Analyzed Dil Fac D 08/03/23 01:56 mg/Kg

QC Sample Results

Client: Ensolum Job ID: 890-5013-1 Project/Site: James Ranch Unit Booster

SDG: 03C1558261

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-59035/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 59124

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Chloride 250 243.1 mg/Kg 97 90 - 110

Lab Sample ID: LCSD 880-59035/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 59124

Spike LCSD LCSD %Rec RPD Added Result Qualifier RPD Limit Analyte Unit D %Rec Limits Chloride 250 243.2 mg/Kg 97 0

Lab Sample ID: 890-5013-1 MS **Client Sample ID: SS01 Matrix: Solid Prep Type: Soluble**

Analysis Batch: 59124

%Rec Sample Sample Spike MS MS Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 16900 4990 22440 110 90 - 110 mg/Kg

Lab Sample ID: 890-5013-1 MSD **Client Sample ID: SS01 Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 59124

Sample Sample MSD MSD RPD Spike %Rec Analyte Result Qualifier Added Qualifier Unit %Rec RPD Limit Result Limits 16900 4990 22230 Chloride 106 90 - 110 20 mg/Kg

QC Association Summary

Client: Ensolum Job ID: 890-5013-1
Project/Site: James Ranch Unit Booster SDG: 03C1558261

GC VOA

Analysis Batch: 59419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5013-1	SS01	Total/NA	Solid	8021B	59521
MB 880-59463/5-A	Method Blank	Total/NA	Solid	8021B	59463
MB 880-59521/5-A	Method Blank	Total/NA	Solid	8021B	59521
LCS 880-59521/1-A	Lab Control Sample	Total/NA	Solid	8021B	59521
LCSD 880-59521/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	59521
890-5013-1 MS	SS01	Total/NA	Solid	8021B	59521
890-5013-1 MSD	SS01	Total/NA	Solid	8021B	59521

Prep Batch: 59463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-59463/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 59521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5013-1	SS01	Total/NA	Solid	5035	_
MB 880-59521/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-59521/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-59521/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5013-1 MS	SS01	Total/NA	Solid	5035	
890-5013-1 MSD	SS01	Total/NA	Solid	5035	

Analysis Batch: 59604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5013-2	SS02	Total/NA	Solid	8021B	59609
890-5013-3	SS03	Total/NA	Solid	8021B	59609
890-5013-4	SS04	Total/NA	Solid	8021B	59609
890-5013-5	SS05	Total/NA	Solid	8021B	59609
890-5013-6	SS06	Total/NA	Solid	8021B	59609
890-5013-7	SS07	Total/NA	Solid	8021B	59609
MB 880-59609/5-A	Method Blank	Total/NA	Solid	8021B	59609
LCS 880-59609/1-A	Lab Control Sample	Total/NA	Solid	8021B	59609
LCSD 880-59609/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	59609
890-5013-2 MS	SS02	Total/NA	Solid	8021B	59609
890-5013-2 MSD	SS02	Total/NA	Solid	8021B	59609

Prep Batch: 59609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-5013-2	SS02	Total/NA	Solid	5035	
890-5013-3	SS03	Total/NA	Solid	5035	
890-5013-4	SS04	Total/NA	Solid	5035	
890-5013-5	SS05	Total/NA	Solid	5035	
890-5013-6	SS06	Total/NA	Solid	5035	
890-5013-7	SS07	Total/NA	Solid	5035	
MB 880-59609/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-59609/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-59609/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5013-2 MS	SS02	Total/NA	Solid	5035	
890-5013-2 MSD	SS02	Total/NA	Solid	5035	

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QC Association Summary

Client: Ensolum

Job ID: 890-5013-1 Project/Site: James Ranch Unit Booster SDG: 03C1558261

GC VOA

Analysis Batch: 59769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5013-1	SS01	Total/NA	Solid	Total BTEX	
890-5013-2	SS02	Total/NA	Solid	Total BTEX	
890-5013-3	SS03	Total/NA	Solid	Total BTEX	
890-5013-4	SS04	Total/NA	Solid	Total BTEX	
890-5013-5	SS05	Total/NA	Solid	Total BTEX	
890-5013-6	SS06	Total/NA	Solid	Total BTEX	
890-5013-7	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 59649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5013-1	SS01	Total/NA	Solid	8015NM Prep	
890-5013-2	SS02	Total/NA	Solid	8015NM Prep	
890-5013-3	SS03	Total/NA	Solid	8015NM Prep	
890-5013-4	SS04	Total/NA	Solid	8015NM Prep	
890-5013-5	SS05	Total/NA	Solid	8015NM Prep	
890-5013-6	SS06	Total/NA	Solid	8015NM Prep	
890-5013-7	SS07	Total/NA	Solid	8015NM Prep	
MB 880-59649/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-59649/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-59649/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5013-1 MS	SS01	Total/NA	Solid	8015NM Prep	
890-5013-1 MSD	SS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 59688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5013-1	SS01	Total/NA	Solid	8015B NM	59649
890-5013-2	SS02	Total/NA	Solid	8015B NM	59649
890-5013-3	SS03	Total/NA	Solid	8015B NM	59649
890-5013-4	SS04	Total/NA	Solid	8015B NM	59649
890-5013-5	SS05	Total/NA	Solid	8015B NM	59649
890-5013-6	SS06	Total/NA	Solid	8015B NM	59649
890-5013-7	SS07	Total/NA	Solid	8015B NM	59649
MB 880-59649/1-A	Method Blank	Total/NA	Solid	8015B NM	59649
LCS 880-59649/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	59649
LCSD 880-59649/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	59649
890-5013-1 MS	SS01	Total/NA	Solid	8015B NM	59649
890-5013-1 MSD	SS01	Total/NA	Solid	8015B NM	59649

Analysis Batch: 59789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5013-1	SS01	Total/NA	Solid	8015 NM	
890-5013-2	SS02	Total/NA	Solid	8015 NM	
890-5013-3	SS03	Total/NA	Solid	8015 NM	
890-5013-4	SS04	Total/NA	Solid	8015 NM	
890-5013-5	SS05	Total/NA	Solid	8015 NM	
890-5013-6	SS06	Total/NA	Solid	8015 NM	
890-5013-7	SS07	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: James Ranch Unit Booster
Job ID: 890-5013-1
SDG: 03C1558261

HPLC/IC

Leach Batch: 59035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5013-1	SS01	Soluble	Solid	DI Leach	
890-5013-2	SS02	Soluble	Solid	DI Leach	
890-5013-3	SS03	Soluble	Solid	DI Leach	
890-5013-4	SS04	Soluble	Solid	DI Leach	
890-5013-5	SS05	Soluble	Solid	DI Leach	
890-5013-6	SS06	Soluble	Solid	DI Leach	
890-5013-7	SS07	Soluble	Solid	DI Leach	
MB 880-59035/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-59035/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-59035/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5013-1 MS	SS01	Soluble	Solid	DI Leach	
890-5013-1 MSD	SS01	Soluble	Solid	DI Leach	

Analysis Batch: 59124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5013-1	SS01	Soluble	Solid	300.0	59035
890-5013-2	SS02	Soluble	Solid	300.0	59035
890-5013-3	SS03	Soluble	Solid	300.0	59035
890-5013-4	SS04	Soluble	Solid	300.0	59035
890-5013-5	SS05	Soluble	Solid	300.0	59035
890-5013-6	SS06	Soluble	Solid	300.0	59035
890-5013-7	SS07	Soluble	Solid	300.0	59035
MB 880-59035/1-A	Method Blank	Soluble	Solid	300.0	59035
LCS 880-59035/2-A	Lab Control Sample	Soluble	Solid	300.0	59035
LCSD 880-59035/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	59035
890-5013-1 MS	SS01	Soluble	Solid	300.0	59035
890-5013-1 MSD	SS01	Soluble	Solid	300.0	59035

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SDG: 03C1558261

Client: Ensolum Project/Site: James Ranch Unit Booster

Lab Sample ID: 890-5013-1

Client Sample ID: SS01 Date Collected: 07/31/23 10:15

Matrix: Solid

Date Received: 07/31/23 13:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	59521	08/07/23 14:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59419	08/08/23 02:17	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59769	08/15/23 10:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			59789	08/09/23 18:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	59649	08/08/23 15:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59688	08/09/23 10:25	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	59035	08/01/23 15:48	KS	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	59124	08/03/23 02:15	CH	EET MID

Client Sample ID: SS02 Lab Sample ID: 890-5013-2

Date Collected: 07/31/23 10:20 Date Received: 07/31/23 13:55 Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	59609	08/08/23 09:29	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59604	08/08/23 12:23	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59769	08/09/23 14:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			59789	08/10/23 10:27	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	59649	08/08/23 15:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59688	08/09/23 15:38	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	59035	08/01/23 15:48	KS	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	59124	08/03/23 02:33	CH	EET MID

Client Sample ID: SS03 Lab Sample ID: 890-5013-3

Date Collected: 07/31/23 10:25 Date Received: 07/31/23 13:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	59609	08/08/23 09:29	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59604	08/08/23 12:49	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59769	08/09/23 14:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			59789	08/10/23 10:27	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	59649	08/08/23 15:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59688	08/09/23 16:29	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	59035	08/01/23 15:48	KS	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	59124	08/03/23 02:39	CH	EET MID

Client Sample ID: SS04 Lab Sample ID: 890-5013-4

Date Collected: 07/31/23 10:30 Date Received: 07/31/23 13:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	59609	08/08/23 09:29	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59604	08/08/23 13:14	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59769	08/09/23 14:09	SM	EET MID

Eurofins Carlsbad

Matrix: Solid

Matrix: Solid

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Client: Ensolum

Job ID: 890-5013-1

Project/Site: James Ranch Unit Booster SDG: 03C1558261

Client Sample ID: SS04

Date Collected: 07/31/23 10:30

Matrix: Solid

Date Received: 07/31/23 13:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			59789	08/10/23 10:27	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	59649	08/08/23 15:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59688	08/09/23 16:55	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	59035	08/01/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	59124	08/03/23 02:45	CH	EET MID

Client Sample ID: SS05 Lab Sample ID: 890-5013-5

Date Collected: 07/31/23 10:35

Matrix: Solid

Date Received: 07/31/23 13:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	59609	08/08/23 09:29	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59604	08/08/23 13:40	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59769	08/09/23 14:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			59789	08/10/23 10:27	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	59649	08/08/23 15:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59688	08/09/23 17:21	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	59035	08/01/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	59124	08/03/23 02:51	CH	EET MID

Client Sample ID: SS06 Lab Sample ID: 890-5013-6

Date Collected: 07/31/23 10:40 Date Received: 07/31/23 13:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	59609	08/08/23 09:29	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59604	08/08/23 14:06	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59769	08/09/23 14:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			59789	08/10/23 10:27	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	59649	08/08/23 15:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59688	08/09/23 17:46	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	59035	08/01/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	59124	08/03/23 03:10	CH	EET MID

Client Sample ID: SS07 Lab Sample ID: 890-5013-7

Date Collected: 07/31/23 10:45 Date Received: 07/31/23 13:55

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	59609	08/08/23 09:29	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59604	08/08/23 14:31	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59769	08/09/23 14:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			59789	08/10/23 10:27	AJ	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	9.96 g 1 uL	10 mL 1 uL	59649 59688	08/08/23 15:08 08/09/23 18:10	TKC AJ	EET MID EET MID

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Matrix: Solid

Matrix: Solid

Lab Chronicle

Client: Ensolum Job ID: 890-5013-1
Project/Site: James Ranch Unit Booster SDG: 03C1558261

Client Sample ID: SS07 Lab Sample ID: 890-5013-7

Date Collected: 07/31/23 10:45

Date Received: 07/31/23 13:55

Matrix: Solid

Batch Batch Dil Initial Final Batch Prepared Method Prep Type Туре Run Factor Amount Amount Number or Analyzed Analyst Lab Soluble DI Leach 59035 KS EET MID Leach 4.98 g 50 mL 08/01/23 15:48 300.0 EET MID Soluble Analysis 50 mL 50 mL 59124 08/03/23 03:16 СН

Laboratory References:

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

Eurofins Carlsbad

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Accreditation/Certification Summary

Client: Ensolum Job ID: 890-5013-1
Project/Site: James Ranch Unit Booster SDG: 03C1558261

Laboratory: Eurofins Midland

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

Authority	Pre	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-23-26	06-30-24
The following analytes	and the also dead the determinant last			
the agency does not of	' '	it the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes for
,	' '	Matrix	ed by the governing authority. This list ma	ay include analytes for
the agency does not of	fer certification.	•	, , ,	ay include analytes for

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Method Summary

Client: Ensolum

Project/Site: James Ranch Unit Booster

Job ID: 890-5013-1

SDG: 03C1558261

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

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Sample Summary

Client: Ensolum

890-5013-5

890-5013-6

890-5013-7

Project/Site: James Ranch Unit Booster

SS05

SS06

SS07

Job ID: 890-5013-1 SDG: 03C1558261

Lab Sample ID Client Sample ID Collected Received Matrix Depth SS01 890-5013-1 Solid 07/31/23 10:15 07/31/23 13:55 0.5 890-5013-2 SS02 Solid 07/31/23 10:20 07/31/23 13:55 0.5 890-5013-3 SS03 Solid 07/31/23 10:25 07/31/23 13:55 0.5 890-5013-4 SS04 Solid 07/31/23 10:30 07/31/23 13:55 0.5

07/31/23 10:35

07/31/23 10:40

07/31/23 10:45

07/31/23 13:55

07/31/23 13:55

07/31/23 13:55

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Environment Testing Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Chain of Custody Work Order No:

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		1.31.231355	7		SW)	Cla	1 same
Signature) Date∕Time	ure) Received by: (Signature)	Date/Time Relinquished by: (Signature)	Da	(3)	Received by: (Signature)	re) \ \ \ \ \ \ \ \ \ \ \ \ Re	linquished by: (Signature)
	ms and conditions eyond the control ss previously negotiated.	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 iliable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$55.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated of Eurofins Xenco. A minimum charge of \$65.00 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 of Eurofins Xenco.	to Eurofins X or expenses in ted to Eurofi	er from client company nsibility for any losses of for each sample submit	nstitutes a valid purchase ordered shall not assume any responds the project and a charge of \$5 f	elinquishment of samples conly for the cost of samples are \$85.00 will be applied to each	gnature of this document and re . Eurofins Xenco will be liable or is Xenco. A minimum charge of
Ag SiO ₂ Na Sr Tl Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471	li K Se	A 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg NTCLP/SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se	Al Sb As Ba Be CRA Sb As Ba Be	13PPM Texas 11 , LP / SPLP 6010 : 8RC	8RCRA 13PP ed TCLP/SI	200.8 / 6020: tal(s) to be analyze	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed
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moberts@ensolum		* *	+	4	1045	<	5507
					1040		4058
AS PA					1035		8505
LOST CENTER:					1030		SS04
					1025		2022
nAPP2319954265			_	_	1020	-	1055
Incident #		X X X	>	0.5 6	131/13 1015	7 2	1088
Sample Comments		Ch Br	# of Cont	Depth Grab/	Date Time Sampled Sampled	Matrix Sa	Sample Identification
NaOH+Ascorbic Acid: SAPC		101			Corrected Temperature:	(6)	Total Containers:
Zn Acetate+NaOH: Zn	of Custody			(a)	Temperature Reading:	Yes No N/A Ter	Sample Custody Seals:
Na ₂ S ₂ O ₃ ; NaSO ₃		25	Pa	2	Correction Factor:	Yes No NIA COI	
NaHSO 4: NABIS			ram	Two or	Thermometer ID:	Yes No The	Samples Received Intact:
H ₃ PO ₄ : HP			neter	Yes No	No Wet ice:	Temp Blank: Yes	SAMPLE RECEIPT
H ₂ SO ₄ : H ₂ NaOH: Na	-		s	the lab, if received by 4:30pm			
HCL: HC HNO 3: HN				TAT starts the day received by		th Ro	
Cool: Cool MeOH: Me					541 Due Date:	072 -103.92541	Project Location: 32.45012
None: NO DI Water: H ₂ O			Code	Rush	Routine	0	er:
Preservative Codes	JEST	ANALYSIS REQUES		Tum Around		ames Unit Booster	Project Name: Jame!
ADaPT Other:	Deliverables: EDD	ensolum. wm	किटों।ि ध	back	2 Email:	989.854.085	
Reporting: Level III Level III PST/UST TRRP Level IV	Reporting: Level II Level I	Carishad, NM 88220		City, State ZIP:	02283	Carlsbad, NM	e ZIP:
	State of Project:	3104 F Greene St		Address:	Parks Hwy	3122 Nat 1 Par	
UST/PST PRP Brownfields RRC Superfund	Program: UST/PST PRP	XTD Energy, Inc		Company Name:		Ensolum, LLC	Company Name:
Work Order Comments	WORK	Darct & Green		Bill to: (if different)		o Bellil	Project Manager: Ben

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-5013-1

 SDG Number: 03C1558261

Login Number: 5013 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5013-1 SDG Number: 03C1558261

Login Number: 5013 **List Source: Eurofins Midland** List Number: 2 List Creation: 08/02/23 10:57 AM

Creator: Rodriguez, Leticia

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

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill Ensolum 601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 9/1/2023 2:09:31 PM

JOB DESCRIPTION

James Ranch Unit Booster SDG NUMBER 03C1558161

JOB NUMBER

890-5162-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

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

Authorization

Generated 9/1/2023 2:09:31 PM

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

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

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Client: Ensolum
Project/Site: James Ranch Unit Booster

Laboratory Job ID: 890-5162-1
SDG: 03C1558161

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QC Sample Results	13
QC Association Summary	19
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Certification Summary	24
Method Summary	25
Sample Summary	26
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Definitions/Glossary

Client: Ensolum Job ID: 890-5162-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

558161

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

HPLC/IC

RER

RPD TEF

TEQ TNTC

RL

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

Eurofins Carlsbad

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)
Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count

Reporting Limit or Requested Limit (Radiochemistry)

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

Case Narrative

Client: Ensolum

Job ID: 890-5162-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

Job ID: 890-5162-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5162-1

Receipt

The samples were received on 8/25/2023 4:02 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-5162-1), FS02 (890-5162-2), FS03 (890-5162-3), FS04 (890-5162-4), SW01 (890-5162-5) and SW02 (890-5162-6).

GC VOA

Method 8021B: CCV was biased low for benzene. Another CCV was analyzed and acceptable within the method derived 12 hour window; therefore, the data was qualified and reported.(CCV 880-61519/33)

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-61602 and analytical batch 880-61519 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (880-32754-A-1-D MS) and (880-32754-A-1-E MSD). 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: SW02 (890-5162-6) and (880-32754-A-1-F). 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 and precision for preparation batch 880-61676 and analytical batch 880-61634 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

Method 8015MOD NM: The surrogate recovery for the blank associated with preparation batch 880-61457 and analytical batch 880-61504 was outside the upper control limits.

Method 8015MOD NM: Surrogate recovery for the following samples were outside control limits: FS01 (890-5162-1), FS02 (890-5162-2), FS03 (890-5162-3), FS04 (890-5162-4), SW01 (890-5162-5), SW02 (890-5162-6), (890-5162-A-1-B MS) and (890-5162-A-1-C 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 samples were outside control limits: (CCV 880-61504/20) and (CCV 880-61504/5). Evidence of matrix interferences is not obvious.

Method 8015MOD NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-61457 and analytical batch 880-61504 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 880-61532 and analytical batch 880-61600 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.

Case Narrative

Client: Ensolum Job ID: 890-5162-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

Job ID: 890-5162-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

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

Job ID: 890-5162-1

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS01 Lab Sample ID: 890-5162-1

Date Collected: 08/25/23 13:20 Matrix: Solid Date Received: 08/25/23 16:02

Sample Depth: 1.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/30/23 08:35	08/31/23 02:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/30/23 08:35	08/31/23 02:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/30/23 08:35	08/31/23 02:16	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		08/30/23 08:35	08/31/23 02:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/30/23 08:35	08/31/23 02:16	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		08/30/23 08:35	08/31/23 02:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130			08/30/23 08:35	08/31/23 02:16	1
1,4-Difluorobenzene (Surr)	46	S1-	70 - 130			08/30/23 08:35	08/31/23 02:16	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00401	U	0.00401	mg/Kg			08/31/23 10:48	1
Method: SW846 8015 NM - Diese Analyte	Result	Qualifier	GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg				
·							08/31/23 10:35	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)				08/31/23 10:35	1
Method: SW846 8015B NM - Dies Analyte		nics (DRO) Qualifier	(GC)	Unit	D	Prepared	08/31/23 10:35 Analyzed	
Analyte		Qualifier	• •	Unit mg/Kg	<u>D</u>	Prepared 08/29/23 12:00		Dil Fac
Analyte Gasoline Range Organics	Result	Qualifier	RL		<u>D</u>	<u>.</u>	Analyzed	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9	Qualifier U U F1	RL 49.9	mg/Kg	<u> </u>	08/29/23 12:00	Analyzed 08/30/23 11:04	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9 <49.9	Qualifier U U F1	RL 49.9 49.9	mg/Kg	<u> </u>	08/29/23 12:00 08/29/23 12:00	Analyzed 08/30/23 11:04 08/30/23 11:04	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9 <49.9 <49.9 <49.9 %Recovery	Qualifier U U F1	RL 49.9 49.9 49.9	mg/Kg	<u> </u>	08/29/23 12:00 08/29/23 12:00 08/29/23 12:00	Analyzed 08/30/23 11:04 08/30/23 11:04 08/30/23 11:04	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate	Result <49.9 <49.9 <49.9 <49.9 %Recovery	Qualifier U U F1 U Qualifier	RL 49.9 49.9 49.9 <i>Limits</i>	mg/Kg	<u> </u>	08/29/23 12:00 08/29/23 12:00 08/29/23 12:00 Prepared	Analyzed 08/30/23 11:04 08/30/23 11:04 08/30/23 11:04 Analyzed	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U U F1 U Qualifier S1+	RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg	<u> </u>	08/29/23 12:00 08/29/23 12:00 08/29/23 12:00 Prepared 08/29/23 12:00	Analyzed 08/30/23 11:04 08/30/23 11:04 08/30/23 11:04 Analyzed 08/30/23 11:04	1 Dil Face 1 Dil Face 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U U F1 U Qualifier S1+	RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg	<u>D</u>	08/29/23 12:00 08/29/23 12:00 08/29/23 12:00 Prepared 08/29/23 12:00	Analyzed 08/30/23 11:04 08/30/23 11:04 08/30/23 11:04 Analyzed 08/30/23 11:04	Dil Fac

Client Sample ID: FS02 Lab Sample ID: 890-5162-2 Matrix: Solid

Date Collected: 08/25/23 13:25 Date Received: 08/25/23 16:02

Sample Depth: 1.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		08/30/23 08:35	08/31/23 02:37	1
Toluene	<0.00198	U	0.00198	mg/Kg		08/30/23 08:35	08/31/23 02:37	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		08/30/23 08:35	08/31/23 02:37	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		08/30/23 08:35	08/31/23 02:37	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		08/30/23 08:35	08/31/23 02:37	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		08/30/23 08:35	08/31/23 02:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			08/30/23 08:35	08/31/23 02:37	1

Job ID: 890-5162-1

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS02 Lab Sample ID: 890-5162-2

Date Collected: 08/25/23 13:25 Matrix: Solid Date Received: 08/25/23 16:02

Sample Depth: 1.5

Method: SW846 8021B - Volatile	Organic Compounds	(GC) (Continued)
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Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1 4-Difluorobenzene (Surr)	54 S1-	70 _ 130	08/30/23 08:35	08/31/23 02:37	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00397	U	0.00397	mg/Kg			08/31/23 10:48	1

ı								
ı	Mothod: 9	312M2	2015 NI	M - Dioce	I Dango	Organice	(DRO) (GC)	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<50.5	U	50.5	ma/Ka			08/31/23 10:35	1	

	Mothod: SW046 904ED NM Diocol Dan	go Organico (DBO) (CC)	v
ı	Method: SW846 8015B NM - Diesel Ran	ge Organics (DRO) (GC)	,

		(=::=)	()					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	mg/Kg		08/29/23 12:00	08/30/23 12:10	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		08/29/23 12:00	08/30/23 12:10	1
Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		08/29/23 12:00	08/30/23 12:10	1
Surrogate	%Pecovery	Qualifier	l imite			Propared	Analyzod	Dil Eac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	139	S1+	70 - 130	08/29/23 12:00	08/30/23 12:10	1
o-Terphenyl	135	S1+	70 - 130	08/29/23 12:00	08/30/23 12:10	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	446		4.97	mg/Kg			08/30/23 21:35	1

Client Sample ID: FS03 Lab Sample ID: 890-5162-3

Date Collected: 08/25/23 12:30 Date Received: 08/25/23 16:02

Sample Depth: 1

l				
Method: SW	846 8021B	- Volatile Orga	anic Compound	s (GC)

Welliou. Syvo40 602 IB - Volat	ne Organic Comp	ounus (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/30/23 08:35	08/31/23 02:57	1
Toluene	< 0.00199	U	0.00199	mg/Kg		08/30/23 08:35	08/31/23 02:57	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		08/30/23 08:35	08/31/23 02:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/30/23 08:35	08/31/23 02:57	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		08/30/23 08:35	08/31/23 02:57	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/30/23 08:35	08/31/23 02:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130			08/30/23 08:35	08/31/23 02:57	1
1 4-Difluorobenzene (Surr)	65	S1-	70 - 130			08/30/23 08:35	08/31/23 02:57	1

4-Bromofluorobenzene (Surr)	91	70 - 130	08/30/23 08:35	08/31/23 02:57	1
1,4-Difluorobenzene (Surr)	65 S1-	70 - 130	08/30/23 08:35	08/31/23 02:57	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			08/31/23 10:48	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7	mg/Kg		_	08/31/23 10:35	1

Eurofins Carlsbad

Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-5162-3

08/30/23 12:33

Lab Sample ID: 890-5162-4

Matrix: Solid

08/29/23 12:00

Client Sample Results

Client: Ensolum Job ID: 890-5162-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS03

Date Collected: 08/25/23 12:30 Date Received: 08/25/23 16:02

Sample Depth: 1

o-Terphenyl

- Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	mg/Kg		08/29/23 12:00	08/30/23 12:33	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		08/29/23 12:00	08/30/23 12:33	1
Oll Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		08/29/23 12:00	08/30/23 12:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	136	S1+	70 - 130			08/29/23 12:00	08/30/23 12:33	1

Method: EPA 300.0 - Anions, Ion C	hromatography - Soluble						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	173	4.98	mg/Kg			08/30/23 21:41	1

70 - 130

133 S1+

Client Sample ID: FS04

Date Collected: 08/25/23 13:30 Date Received: 08/25/23 16:02

Sample Depth: 1.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		08/30/23 08:35	08/31/23 03:17	1
Toluene	<0.00198	U	0.00198	mg/Kg		08/30/23 08:35	08/31/23 03:17	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		08/30/23 08:35	08/31/23 03:17	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		08/30/23 08:35	08/31/23 03:17	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		08/30/23 08:35	08/31/23 03:17	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		08/30/23 08:35	08/31/23 03:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130			08/30/23 08:35	08/31/23 03:17	1
1,4-Difluorobenzene (Surr)	72		70 - 130			08/30/23 08:35	08/31/23 03:17	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			08/31/23 10:48	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			08/31/23 10:35	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6	mg/Kg		08/29/23 12:00	08/30/23 12:55	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		08/29/23 12:00	08/30/23 12:55	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		08/29/23 12:00	08/30/23 12:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	151	S1+	70 - 130			08/29/23 12:00	08/30/23 12:55	1

Client Sample Results

Client: Ensolum Job ID: 890-5162-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS04 Lab Sample ID: 890-5162-4

Date Collected: 08/25/23 13:30 Matrix: Solid
Date Received: 08/25/23 16:02

Sample Depth: 1.5

Method: EPA 300.0 - Anions, Ion Ch	romatograp	hy - Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	132		4.99	mg/Kg			08/30/23 21:47	1

Client Sample ID: SW01

Date Collected: 08/25/23 14:20

Lab Sample ID: 890-5162-5

Matrix: Solid

Date Collected: 08/25/23 14:20 Date Received: 08/25/23 16:02

Sample Depth: 0 - 1.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00198	U	0.00198	mg/Kg		08/31/23 15:47	09/01/23 09:49	
Toluene	<0.00198	U	0.00198	mg/Kg		08/31/23 15:47	09/01/23 09:49	
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		08/31/23 15:47	09/01/23 09:49	
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		08/31/23 15:47	09/01/23 09:49	
o-Xylene	<0.00198	U	0.00198	mg/Kg		08/31/23 15:47	09/01/23 09:49	
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		08/31/23 15:47	09/01/23 09:49	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	89		70 - 130			08/31/23 15:47	09/01/23 09:49	
1,4-Difluorobenzene (Surr)	95		70 - 130			08/31/23 15:47	09/01/23 09:49	
Method: TAL SOP Total BTEX -	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	< 0.00396	U	0.00396	mg/Kg			09/01/23 11:10	
Mothod: SW946 9045 NM Diggs	al Banga Organ	ico (DBO) (CC)					
Method: SW846 8015 NM - Diese Analyte	•	, ,,	•	Unit	n	Prenared	Analyzed	Dil Fa
Analyte	Result	Qualifier	RL	Unit ma/Ka	<u>D</u>	Prepared	Analyzed 08/31/23 10:35	
	•	Qualifier	•	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 08/31/23 10:35	
Analyte Total TPH	Result < 50.3	Qualifier U	RL 50.3		<u>D</u>	Prepared		
Analyte	Result <50.3	Qualifier U	RL 50.3		<u>D</u>	Prepared Prepared		
Analyte Total TPH Method: SW846 8015B NM - Die Analyte	Result <50.3	Qualifier Unics (DRO) Qualifier	RL 50.3	mg/Kg			08/31/23 10:35	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Die	Result <50.3 sel Range Orga Result	Qualifier Unics (DRO) Qualifier	RL 50.3 (GC)	mg/Kg		Prepared	08/31/23 10:35 Analyzed	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.3 sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	RL 50.3 (GC)	mg/Kg		Prepared	08/31/23 10:35 Analyzed	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result	Qualifier U nics (DRO) Qualifier U	RL 50.3 (GC) RL 50.3 50.3	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/29/23 12:00 08/29/23 12:00	08/31/23 10:35 Analyzed 08/30/23 13:17 08/30/23 13:17	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10	Result <50.3 sel Range Orga Result <50.3	Qualifier U nics (DRO) Qualifier U	RL 50.3 (GC) RL 50.3	mg/Kg Unit mg/Kg		Prepared 08/29/23 12:00	08/31/23 10:35 Analyzed 08/30/23 13:17	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result	Qualifier U nics (DRO) Qualifier U U Qualifier	RL 50.3 (GC) RL 50.3 50.3 50.3 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/29/23 12:00 08/29/23 12:00	08/31/23 10:35 Analyzed 08/30/23 13:17 08/30/23 13:17 08/30/23 13:17 Analyzed	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result	Qualifier U nics (DRO) Qualifier U U	RL 50.3 (GC) RL 50.3 50.3 50.3	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/29/23 12:00 08/29/23 12:00 08/29/23 12:00	08/31/23 10:35 Analyzed 08/30/23 13:17 08/30/23 13:17	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U nics (DRO) Qualifier U U Qualifier	RL 50.3 (GC) RL 50.3 50.3 50.3 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/29/23 12:00 08/29/23 12:00 08/29/23 12:00 Prepared	08/31/23 10:35 Analyzed 08/30/23 13:17 08/30/23 13:17 08/30/23 13:17 Analyzed	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result	Qualifier U nics (DRO) Qualifier U U Qualifier S1+ S1+	RL 50.3 (GC) RL 50.3 50.3 50.3 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/29/23 12:00 08/29/23 12:00 08/29/23 12:00 Prepared 08/29/23 12:00	08/31/23 10:35 Analyzed 08/30/23 13:17 08/30/23 13:17 Analyzed 08/30/23 13:17	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U nics (DRO) Qualifier U U Qualifier S1+ S1+	RL 50.3 (GC) RL 50.3 50.3 50.3 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/29/23 12:00 08/29/23 12:00 08/29/23 12:00 Prepared 08/29/23 12:00	08/31/23 10:35 Analyzed 08/30/23 13:17 08/30/23 13:17 Analyzed 08/30/23 13:17	Dil Fa

Client Sample Results

Client: Ensolum Job ID: 890-5162-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: SW02

Date Collected: 08/25/23 14:40

Lab Sample ID: 890-5162-6

Matrix: Solid

Sample Depth: 0 - 1

Chloride

Date Received: 08/25/23 16:02

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		08/31/23 15:47	09/01/23 10:10	
Toluene	< 0.00199	U	0.00199	mg/Kg		08/31/23 15:47	09/01/23 10:10	
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		08/31/23 15:47	09/01/23 10:10	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/31/23 15:47	09/01/23 10:10	
o-Xylene	< 0.00199	U	0.00199	mg/Kg		08/31/23 15:47	09/01/23 10:10	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/31/23 15:47	09/01/23 10:10	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	113		70 - 130			08/31/23 15:47	09/01/23 10:10	
1,4-Difluorobenzene (Surr)	139	S1+	70 - 130			08/31/23 15:47	09/01/23 10:10	
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/01/23 11:10	•
·								
: Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)					
		ics (DRO) (Qualifier	GC)	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH		Qualifier	•	<mark>Unit</mark> mg/Kg	<u>D</u>	Prepared	Analyzed 08/31/23 10:35	Dil Fac
Analyte Total TPH	Result <50.1	Qualifier U	50.1		<u>D</u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <50.1 sel Range Orga	Qualifier U	50.1		<u>D</u>	Prepared Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result <50.1 sel Range Orga	Qualifier U unics (DRO) Qualifier	RL 50.1	mg/Kg		<u> </u>	08/31/23 10:35	
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.1 sel Range Orga	Qualifier U unics (DRO) Qualifier U	RL	mg/Kg		Prepared	08/31/23 10:35 Analyzed	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.1 sel Range Orga Result <50.1	Qualifier U unics (DRO) Qualifier U	(GC) RL 50.1	mg/Kg Unit mg/Kg		Prepared 08/29/23 12:00	08/31/23 10:35 Analyzed 08/30/23 13:39	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.1	Qualifier U unics (DRO) Qualifier U U	RL 50.1 (GC) RL 50.1 50.1	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/29/23 12:00 08/29/23 12:00	08/31/23 10:35 Analyzed 08/30/23 13:39 08/30/23 13:39	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <50.1	Qualifier U unics (DRO) Qualifier U U	RL 50.1 (GC) RL 50.1 50.1 50.1	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/29/23 12:00 08/29/23 12:00 08/29/23 12:00	08/31/23 10:35 Analyzed 08/30/23 13:39 08/30/23 13:39 08/30/23 13:39	Dil Fa
Analyte	Result <50.1	Qualifier U unics (DRO) Qualifier U U Qualifier	RL 50.1 (GC) RL 50.1 50.1 50.1 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/29/23 12:00 08/29/23 12:00 08/29/23 12:00 Prepared	08/31/23 10:35 Analyzed 08/30/23 13:39 08/30/23 13:39 08/30/23 13:39 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <50.1	Qualifier U U Qualifier U U Qualifier S1+ S1+	RL 50.1 (GC) RL 50.1 50.1 50.1 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/29/23 12:00 08/29/23 12:00 08/29/23 12:00 Prepared 08/29/23 12:00	08/31/23 10:35 Analyzed 08/30/23 13:39 08/30/23 13:39 08/30/23 13:39 Analyzed 08/30/23 13:39	Dil Fac

5.05

124

mg/Kg

08/30/23 22:13

Surrogate Summary

Job ID: 890-5162-1 Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-32558-A-1-C MS	Matrix Spike	87	76	
880-32558-A-1-D MSD	Matrix Spike Duplicate	90	73	
880-32754-A-1-D MS	Matrix Spike	118	167 S1+	
880-32754-A-1-E MSD	Matrix Spike Duplicate	225 S1+	99	
890-5162-1	FS01	83	46 S1-	
890-5162-2	FS02	107	54 S1-	
890-5162-3	FS03	91	65 S1-	
890-5162-4	FS04	139 S1+	72	
890-5162-5	SW01	89	95	
890-5162-6	SW02	113	139 S1+	
LCS 880-61602/1-A	Lab Control Sample	140 S1+	112	
LCS 880-61676/1-A	Lab Control Sample	81	99	
LCSD 880-61602/2-A	Lab Control Sample Dup	146 S1+	113	
LCSD 880-61676/2-A	Lab Control Sample Dup	92	97	
MB 880-61572/5-A	Method Blank	76	81	
MB 880-61602/5-A	Method Blank	80	80	
MB 000 04045/5 A	Method Blank	103	122	
MB 880-61615/5-A		104	126	

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

		4004	OTPUI	Percent Surrogate Recovery (Acceptance Limits)
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-5162-1	FS01	132 S1+	125	
890-5162-1 MS	FS01	137 S1+	114	
890-5162-1 MSD	FS01	141 S1+	118	
890-5162-2	FS02	139 S1+	135 S1+	
890-5162-3	FS03	136 S1+	133 S1+	
890-5162-4	FS04	151 S1+	142 S1+	
890-5162-5	SW01	143 S1+	136 S1+	
890-5162-6	SW02	147 S1+	139 S1+	
LCS 880-61457/2-A	Lab Control Sample	109	123	
LCSD 880-61457/3-A	Lab Control Sample Dup	111	116	
MB 880-61457/1-A	Method Blank	136 S1+	137 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-5162-1 SDG: 03C1558161 Project/Site: James Ranch Unit Booster

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-61572/5-A

Matrix: Solid

Analysis Batch: 61519

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 61572

1

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/30/23 12:38	08/30/23 12:57	•
Toluene	<0.00200	U	0.00200	mg/Kg		08/30/23 12:38	08/30/23 12:57	•
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/30/23 12:38	08/30/23 12:57	•
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/30/23 12:38	08/30/23 12:57	
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/30/23 12:38	08/30/23 12:57	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/30/23 12:38	08/30/23 12:57	•

MB MB

мв мв

Surrogate	%Recovery Qu	ualifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76	70 - 130	08/30/23 12:38	08/30/23 12:57	1
1,4-Difluorobenzene (Surr)	81	70 - 130	08/30/23 12:38	08/30/23 12:57	1

Lab Sample ID: MB 880-61602/5-A

Matrix: Solid

Analysis Batch: 61519

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 61602

Analyte	Result (Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/30/23 08:35	08/31/23 00:13	1
Toluene	<0.00200 U	U	0.00200	mg/Kg		08/30/23 08:35	08/31/23 00:13	1
Ethylbenzene	<0.00200 U	U	0.00200	mg/Kg		08/30/23 08:35	08/31/23 00:13	1
m-Xylene & p-Xylene	<0.00400 U	U	0.00400	mg/Kg		08/30/23 08:35	08/31/23 00:13	1
o-Xylene	<0.00200 U	U	0.00200	mg/Kg		08/30/23 08:35	08/31/23 00:13	1
Xylenes, Total	<0.00400 U	U	0.00400	mg/Kg		08/30/23 08:35	08/31/23 00:13	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		70 - 130	08/30/23 08:35	08/31/23 00:13	1
1,4-Difluorobenzene (Surr)	80		70 - 130	08/30/23 08:35	08/31/23 00:13	1

Lab Sample ID: LCS 880-61602/1-A

Matrix: Solid

Analysis Batch: 61519

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 61602

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07135		mg/Kg		71	70 - 130	
Toluene	0.100	0.08583		mg/Kg		86	70 - 130	
Ethylbenzene	0.100	0.09784		mg/Kg		98	70 - 130	
m-Xylene & p-Xylene	0.200	0.2168		mg/Kg		108	70 - 130	
o-Xylene	0.100	0.1101		mg/Kg		110	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	140	S1+	70 - 130
1.4-Difluorobenzene (Surr)	112		70 - 130

Lab Sample ID: LCSD 880-61602/2-A

Matrix: Solid

Analysis Batch: 61519

Client Sample ID: Lab	Control Sample Dup
	Dren Trees Total/NA

Prep Type: Total/NA

Prep Batch: 61602

	Spike	LCSD LCSD				70 KeC		KPD	
Analyte	Added	Result Qualifie	r Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.07676	mg/Kg		77	70 - 130	7	35	

LCCD LCCD

Cnika

Client: Ensolum Job ID: 890-5162-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

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

Lab Sample ID: LCSD 880-61602/2-A Matrix: Solid

Analysis Batch: 61519

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 61602

		Spike	LCSD	LCSD				%Rec		RPD
Analy	rte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Tolue	ne	0.100	0.09134		mg/Kg		91	70 - 130	6	35
Ethylb	penzene	0.100	0.1034		mg/Kg		103	70 - 130	6	35
m-Xyl	lene & p-Xylene	0.200	0.2307		mg/Kg		115	70 - 130	6	35
o-Xyle	ene	0.100	0.1170		mg/Kg		117	70 - 130	6	35
1										

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: 880-32558-A-1-C MS

Matrix: Solid

Analysis Batch: 61519

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 61602

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00198	U F1 F2	0.0996	0.02565	F1	mg/Kg		25	70 - 130	
Toluene	<0.00198	U F1 F2	0.0996	0.03751	F1	mg/Kg		38	70 - 130	
Ethylbenzene	<0.00198	U F1 F2	0.0996	0.02878	F1	mg/Kg		29	70 - 130	
m-Xylene & p-Xylene	<0.00397	U F1 F2	0.199	0.05253	F1	mg/Kg		26	70 - 130	
o-Xylene	<0.00198	U F1 F2	0.0996	0.02722	F1	mg/Kg		27	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	87	70 - 130
1,4-Difluorobenzene (Surr)	76	70 - 130

Lab Sample ID: 880-32558-A-1-D MSD

Matrix: Solid

Analysis Batch: 61519

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 61602

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00198	U F1 F2	0.101	0.01712	F1 F2	mg/Kg		16	70 - 130	40	35
Toluene	<0.00198	U F1 F2	0.101	0.01883	F1 F2	mg/Kg		19	70 - 130	66	35
Ethylbenzene	<0.00198	U F1 F2	0.101	0.01036	F1 F2	mg/Kg		10	70 - 130	94	35
m-Xylene & p-Xylene	<0.00397	U F1 F2	0.202	0.01892	F1 F2	mg/Kg		9	70 - 130	94	35
o-Xylene	<0.00198	U F1 F2	0.101	0.01024	F1 F2	mg/Kg		10	70 - 130	91	35

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	90	70 - 130
1,4-Difluorobenzene (Surr)	73	70 - 130

Lab Sample ID: MB 880-61615/5-A

Matrix: Solid

Analysis Batch: 61634

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 61615

MB MB

Analy	te	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benze	ene	<0.00200	U	0.00200	mg/Kg		08/31/23 10:15	08/31/23 14:00	1
Toluen	ne	<0.00200	U	0.00200	mg/Kg		08/31/23 10:15	08/31/23 14:00	1
Ethylb	enzene	<0.00200	U	0.00200	mg/Kg		08/31/23 10:15	08/31/23 14:00	1
m-Xyle	ene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/31/23 10:15	08/31/23 14:00	1

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1 0

Client: Ensolum Job ID: 890-5162-1 SDG: 03C1558161 Project/Site: James Ranch Unit Booster

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

Lab Sample ID: MB 880-61615/5-A

Matrix: Solid

Analysis Batch: 61634

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 61615

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/31/23 10:15	08/31/23 14:00	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/31/23 10:15	08/31/23 14:00	1

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мв мв

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103	70 - 130	08/31/23 10:15	08/31/23 14:00	1
1,4-Difluorobenzene (Surr)	122	70 - 130	08/31/23 10:15	08/31/23 14:00	1

Lab Sample ID: MB 880-61676/5-A **Client Sample ID: Method Blank**

Matrix: Solid

Analysis Batch: 61634

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Prep Type: Total/NA

Prep Batch: 61676

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/31/23 15:47	09/01/23 01:37	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/31/23 15:47	09/01/23 01:37	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/31/23 15:47	09/01/23 01:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/31/23 15:47	09/01/23 01:37	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/31/23 15:47	09/01/23 01:37	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/31/23 15:47	09/01/23 01:37	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	08/31/23 15:47	09/01/23 01:37	1
1,4-Difluorobenzene (Surr)	126		70 - 130	08/31/23 15:47	09/01/23 01:37	1

Lab Sample ID: LCS 880-61676/1-A

Matrix: Solid

Analysis Batch: 61634

Client Sample II	: Lab Contro	Sample
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Prep Type: Total/NA

Prep Batch: 61676

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08766		mg/Kg		88	70 - 130	
Toluene	0.100	0.09048		mg/Kg		90	70 - 130	
Ethylbenzene	0.100	0.07820		mg/Kg		78	70 - 130	
m-Xylene & p-Xylene	0.200	0.1585		mg/Kg		79	70 - 130	
o-Xylene	0.100	0.07601		mg/Kg		76	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	81	70 - 130
1,4-Difluorobenzene (Surr)	99	70 - 130

Lab Sample ID: LCSD 880-61676/2-A

Matrix: Solid

Analysis Batch: 61634

Client	Sample	ID: I ah	Control	Sample	Dun

Prep Type: Total/NA

Prep Batch: 61676

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09768		mg/Kg		98	70 - 130	11	35
Toluene	0.100	0.09327		mg/Kg		93	70 - 130	3	35
Ethylbenzene	0.100	0.08518		mg/Kg		85	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.1840		mg/Kg		92	70 - 130	15	35
o-Xylene	0.100	0.08899		mg/Kg		89	70 - 130	16	35

Client: Ensolum Job ID: 890-5162-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

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

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-32754-A-1-D MS

Matrix: Solid Analysis Batch: 61634

Prep Batch: 61676 Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Benzene <0.00198 U F2 0.0996 0.1202 121 70 - 130 mg/Kg Toluene 0.0996 70 - 130 <0.00198 UF1 0.04880 F1 mg/Kg 49 Ethylbenzene <0.00198 U F1 F2 0.0996 0.04393 F1 mg/Kg 44 70 - 130 m-Xylene & p-Xylene <0.00396 U F1 F2 0.199 0.1238 F1 62 70 - 130 mg/Kg o-Xylene <0.00198 UF1F2 0.0996 0.06325 F1 mg/Kg 64 70 - 130

MS MS %Recovery Qualifier Limits Surrogate 70 - 130 4-Bromofluorobenzene (Surr) 118 1,4-Difluorobenzene (Surr) 167 S1+ 70 - 130

Lab Sample ID: 880-32754-A-1-E MSD

Matrix: Solid

Analysis Batch: 61634

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

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 61676

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00198	U F2	0.100	0.07856	F2	mg/Kg		78	70 - 130	42	35
Toluene	<0.00198	U F1	0.100	0.04205	F1	mg/Kg		42	70 - 130	15	35
Ethylbenzene	<0.00198	U F1 F2	0.100	0.06366	F1 F2	mg/Kg		64	70 - 130	37	35
m-Xylene & p-Xylene	<0.00396	U F1 F2	0.200	0.2163	F2	mg/Kg		108	70 - 130	54	35
o-Xylene	<0.00198	U F1 F2	0.100	0.1199	F2	mg/Kg		120	70 - 130	62	35

MSD MSD %Recovery Qualifier Surrogate Limits S1+ 70 - 130 4-Bromofluorobenzene (Surr) 225 1,4-Difluorobenzene (Surr) 70 - 130

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

Lab Sample ID: MB 880-61457/1-A

Matrix: Solid

Analysis Batch: 61504

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

Prep Batch: 61457

ı		IVID	IVID						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Gasoline Range Organics	<50.0	U	50.0	mg/Kg		08/29/23 12:00	08/30/23 08:32	1
	(GRO)-C6-C10								
	Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		08/29/23 12:00	08/30/23 08:32	1
	C10-C28)								
	Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/29/23 12:00	08/30/23 08:32	1
ı									

ı	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	1-Chlorooctane	136	S1+	70 - 130	08/29/23 12:00	08/30/23 08:32	1
	o-Terphenyl	137	S1+	70 - 130	08/29/23 12:00	08/30/23 08:32	1

Lab Sample ID: LCS 880-61457/2-A

QC Sample Results

Client: Ensolum Job ID: 890-5162-1 SDG: 03C1558161 Project/Site: James Ranch Unit Booster

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

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 61457

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	954.7		mg/Kg		95	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	982.2		mg/Kg		98	70 - 130	
C10-C28)								

Matrix: Solid

Analysis Batch: 61504

LCS LCS Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 109 70 - 130 o-Terphenyl 123

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 880-61457/3-A Matrix: Solid

Prep Type: Total/NA Prep Batch: 61457

Analysis Batch: 61504

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	927.4		mg/Kg		93	70 - 130	3	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	918.9		mg/Kg		92	70 - 130	7	20
C10-C28)									

1000 1000

	LUSD	LUSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	116		70 - 130

Lab Sample ID: 890-5162-1 MS **Client Sample ID: FS01 Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 61504 Prep Batch: 61457

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U	1010	930.3		mg/Kg		89	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U F1	1010	1335		mg/Kg		130	70 - 130	

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	137	S1+	70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: 890-5162-1 MSD Client Sample ID: FS01 **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 61504									Prep	Batch:	61457
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1010	951.7		mg/Kg		91	70 - 130	2	20
Diesel Range Organics (Over	<49.9	U F1	1010	1375	F1	mg/Kg		134	70 - 130	3	20

C10-C28)

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	141	S1+	70 - 130

Lab Sample ID: 890-5162-1 MSD

Client Sample ID: FS01

Job ID: 890-5162-1

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

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

Matrix: Solid

Analysis Batch: 61504

Prep Type: Total/NA Prep Batch: 61457

MSD MSD

Surrogate %Recovery Qualifier Limits o-Terphenyl 118 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-61532/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 61600

MB MB

Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac 5.00 Chloride <5.00 08/30/23 20:56 U mg/Kg

Lab Sample ID: LCS 880-61532/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 61600

LCS LCS Spike %Rec Added Result Qualifier Analyte Unit %Rec Limits Chloride 250 238.5 mg/Kg 95 90 - 110

Lab Sample ID: LCSD 880-61532/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 61600

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 249.1 90 - 110 mg/Kg 100

Lab Sample ID: 890-5162-1 MS **Client Sample ID: FS01 Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 61600

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	531	E1	252	756 1	E1	malka	_	80	00 110	

Lab Sample ID: 890-5162-1 MSD

Matrix: Solid

Analysis Batch: 61600

_	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	531	F1	252	748.5	F1	mg/Kg		86	90 - 110	1	20

Eurofins Carlsbad

Client Sample ID: FS01

Prep Type: Soluble

Client: Ensolum Project/Site: James Ranch Unit Booster

Job ID: 890-5162-1 SDG: 03C1558161

GC VOA

Analysis Batch: 61519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5162-1	FS01	Total/NA	Solid	8021B	61602
890-5162-2	FS02	Total/NA	Solid	8021B	61602
890-5162-3	FS03	Total/NA	Solid	8021B	61602
890-5162-4	FS04	Total/NA	Solid	8021B	61602
MB 880-61572/5-A	Method Blank	Total/NA	Solid	8021B	61572
MB 880-61602/5-A	Method Blank	Total/NA	Solid	8021B	61602
LCS 880-61602/1-A	Lab Control Sample	Total/NA	Solid	8021B	61602
LCSD 880-61602/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61602
880-32558-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	61602
880-32558-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	61602

Prep Batch: 61572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-61572/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 61602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5162-1	FS01	Total/NA	Solid	5035	
890-5162-2	FS02	Total/NA	Solid	5035	
890-5162-3	FS03	Total/NA	Solid	5035	
890-5162-4	FS04	Total/NA	Solid	5035	
MB 880-61602/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-61602/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-61602/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-32558-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-32558-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 61615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-61615/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 61631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5162-1	FS01	Total/NA	Solid	Total BTEX	
890-5162-2	FS02	Total/NA	Solid	Total BTEX	
890-5162-3	FS03	Total/NA	Solid	Total BTEX	
890-5162-4	FS04	Total/NA	Solid	Total BTEX	
890-5162-5	SW01	Total/NA	Solid	Total BTEX	
890-5162-6	SW02	Total/NA	Solid	Total BTEX	

Analysis Batch: 61634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5162-5	SW01	Total/NA	Solid	8021B	61676
890-5162-6	SW02	Total/NA	Solid	8021B	61676
MB 880-61615/5-A	Method Blank	Total/NA	Solid	8021B	61615
MB 880-61676/5-A	Method Blank	Total/NA	Solid	8021B	61676
LCS 880-61676/1-A	Lab Control Sample	Total/NA	Solid	8021B	61676
LCSD 880-61676/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61676
880-32754-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	61676
880-32754-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	61676

Client: Ensolum Job ID: 890-5162-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

GC VOA

Prep Batch: 61676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5162-5	SW01	Total/NA	Solid	5035	
890-5162-6	SW02	Total/NA	Solid	5035	
MB 880-61676/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-61676/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-61676/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-32754-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-32754-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 61457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5162-1	FS01	Total/NA	Solid	8015NM Prep	
890-5162-2	FS02	Total/NA	Solid	8015NM Prep	
890-5162-3	FS03	Total/NA	Solid	8015NM Prep	
890-5162-4	FS04	Total/NA	Solid	8015NM Prep	
890-5162-5	SW01	Total/NA	Solid	8015NM Prep	
890-5162-6	SW02	Total/NA	Solid	8015NM Prep	
MB 880-61457/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-61457/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-61457/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5162-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-5162-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 61504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5162-1	FS01	Total/NA	Solid	8015B NM	61457
890-5162-2	FS02	Total/NA	Solid	8015B NM	61457
890-5162-3	FS03	Total/NA	Solid	8015B NM	61457
890-5162-4	FS04	Total/NA	Solid	8015B NM	61457
890-5162-5	SW01	Total/NA	Solid	8015B NM	61457
890-5162-6	SW02	Total/NA	Solid	8015B NM	61457
MB 880-61457/1-A	Method Blank	Total/NA	Solid	8015B NM	61457
LCS 880-61457/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	61457
LCSD 880-61457/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	61457
890-5162-1 MS	FS01	Total/NA	Solid	8015B NM	61457
890-5162-1 MSD	FS01	Total/NA	Solid	8015B NM	61457

Analysis Batch: 61650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5162-1	FS01	Total/NA	Solid	8015 NM	
890-5162-2	FS02	Total/NA	Solid	8015 NM	
890-5162-3	FS03	Total/NA	Solid	8015 NM	
890-5162-4	FS04	Total/NA	Solid	8015 NM	
890-5162-5	SW01	Total/NA	Solid	8015 NM	
890-5162-6	SW02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 61532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5162-1	FS01	Soluble	Solid	DI Leach	

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Client: Ensolum Job ID: 890-5162-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

HPLC/IC (Continued)

Leach Batch: 61532 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5162-2	FS02	Soluble	Solid	DI Leach	
890-5162-3	FS03	Soluble	Solid	DI Leach	
890-5162-4	FS04	Soluble	Solid	DI Leach	
890-5162-5	SW01	Soluble	Solid	DI Leach	
890-5162-6	SW02	Soluble	Solid	DI Leach	
MB 880-61532/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-61532/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-61532/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5162-1 MS	FS01	Soluble	Solid	DI Leach	
890-5162-1 MSD	FS01	Soluble	Solid	DI Leach	

Analysis Batch: 61600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5162-1	FS01	Soluble	Solid	300.0	61532
890-5162-2	FS02	Soluble	Solid	300.0	61532
890-5162-3	FS03	Soluble	Solid	300.0	61532
890-5162-4	FS04	Soluble	Solid	300.0	61532
890-5162-5	SW01	Soluble	Solid	300.0	61532
890-5162-6	SW02	Soluble	Solid	300.0	61532
MB 880-61532/1-A	Method Blank	Soluble	Solid	300.0	61532
LCS 880-61532/2-A	Lab Control Sample	Soluble	Solid	300.0	61532
LCSD 880-61532/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	61532
890-5162-1 MS	FS01	Soluble	Solid	300.0	61532
890-5162-1 MSD	FS01	Soluble	Solid	300.0	61532

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Released to Imaging: 2/16/2024 2:53:04 PM

Job ID: 890-5162-1

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS01 Lab Sample ID: 890-5162-1

Date Collected: 08/25/23 13:20 **Matrix: Solid** Date Received: 08/25/23 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	61602	08/30/23 08:35	AJ	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61519	08/31/23 02:16	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61631	08/31/23 10:48	AJ	EET MID
Total/NA	Analysis	8015 NM		1			61650	08/31/23 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	61457	08/29/23 12:00	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61504	08/30/23 11:04	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	61532	08/30/23 10:30	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61600	08/30/23 21:15	CH	EET MID

Client Sample ID: FS02 Lab Sample ID: 890-5162-2

Date Collected: 08/25/23 13:25 Matrix: Solid Date Received: 08/25/23 16:02

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Prep 5035 61602 Total/NA 5.04 g 5 mL 08/30/23 08:35 AJ EET MID Total/NA 8021B 08/31/23 02:37 **EET MID** Analysis 1 5 mL 5 mL 61519 AJ Total/NA Total BTEX 61631 08/31/23 10:48 Analysis A.I **EET MID** 1 Total/NA Analysis 8015 NM 61650 08/31/23 10:35 SM **EET MID** Total/NA 61457 Prep 8015NM Prep 9.91 g 10 mL 08/29/23 12:00 TKC EET MID Total/NA Analysis 8015B NM 1 uL 1 uL 61504 08/30/23 12:10 SM **EET MID** Soluble Leach DI Leach 5.03 g 50 mL 61532 08/30/23 10:30 SMC EET MID

Client Sample ID: FS03 Lab Sample ID: 890-5162-3

50 mL

50 mL

61600

08/30/23 21:35

СН

Date Collected: 08/25/23 12:30 **Matrix: Solid** Date Received: 08/25/23 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	61602	08/30/23 08:35	AJ	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61519	08/31/23 02:57	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61631	08/31/23 10:48	AJ	EET MID
Total/NA	Analysis	8015 NM		1			61650	08/31/23 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	61457	08/29/23 12:00	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61504	08/30/23 12:33	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	61532	08/30/23 10:30	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61600	08/30/23 21:41	CH	EET MID

Lab Sample ID: 890-5162-4 **Client Sample ID: FS04**

Date Collected: 08/25/23 13:30 Matrix: Solid Date Received: 08/25/23 16:02

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	61602	08/30/23 08:35	AJ	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61519	08/31/23 03:17	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61631	08/31/23 10:48	AJ	EET MID

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Soluble

Analysis

300.0

EET MID

Client: Ensolum Project/Site: James Ranch Unit Booster Job ID: 890-5162-1

SDG: 03C1558161

Client Sample ID: FS04

Date Collected: 08/25/23 13:30 Date Received: 08/25/23 16:02 Lab Sample ID: 890-5162-4

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			61650	08/31/23 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	61457	08/29/23 12:00	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61504	08/30/23 12:55	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	61532	08/30/23 10:30	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61600	08/30/23 21:47	CH	EET MID

Client Sample ID: SW01 Lab Sample ID: 890-5162-5

Date Collected: 08/25/23 14:20 Date Received: 08/25/23 16:02

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	61676	08/31/23 15:47	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61634	09/01/23 09:49	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61631	09/01/23 11:10	AJ	EET MID
Total/NA	Analysis	8015 NM		1			61650	08/31/23 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	61457	08/29/23 12:00	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61504	08/30/23 13:17	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	61532	08/30/23 10:30	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61600	08/30/23 21:54	CH	EET MID

Client Sample ID: SW02 Lab Sample ID: 890-5162-6

Date Collected: 08/25/23 14:40 Date Received: 08/25/23 16:02 **Matrix: Solid**

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	61676	08/31/23 15:47	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61634	09/01/23 10:10	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61631	09/01/23 11:10	AJ	EET MID
Total/NA	Analysis	8015 NM		1			61650	08/31/23 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	61457	08/29/23 12:00	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61504	08/30/23 13:39	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	61532	08/30/23 10:30	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61600	08/30/23 22:13	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 Job ID: 890-5162-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-23-26	06-30-24
The following analytes	are included in this report, bu	it the laboratory is not certific	ed by the governing authority. This list ma	av include analytes for
the agency does not of	fer certification.	,	, gg,	.,
the agency does not of Analysis Method	fer certification. Prep Method	Matrix	Analyte	,
9 ,		•	, , ,	

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Method Summary

Client: Ensolum Project/Site: James Ranch Unit Booster Job ID: 890-5162-1

SDG: 03C1558161

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum

Project/Site: James Ranch Unit Booster

Job ID: 890-5162-1 SDG: 03C1558161

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5162-1	FS01	Solid	08/25/23 13:20	08/25/23 16:02	1.5
890-5162-2	FS02	Solid	08/25/23 13:25	08/25/23 16:02	1.5
890-5162-3	FS03	Solid	08/25/23 12:30	08/25/23 16:02	1
890-5162-4	FS04	Solid	08/25/23 13:30	08/25/23 16:02	1.5
890-5162-5	SW01	Solid	08/25/23 14:20	08/25/23 16:02	0 - 1.5
890-5162-6	SW02	Solid	08/25/23 14:40	08/25/23 16:02	0 - 1

3

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9

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12

13

114

13

eurofins : **Environment Testing** Xenco

Company Name: Project Manager:

Company Name: Bill to: (if different)

Chain of Custody

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 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Garrett Green

UST/PST PRP Brownfields

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Work Order Comments

www.xenco.com

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Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time		Received by: (Signature)	(Signature)	Relinquished by: (Signature)
	Iffions Introl regotlated.	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.	urofins Xenco, its affiliates and penses incurred by the client its Eurofins Xenco, but not and	from client company to i sibility for any losses or ex reach sample submitted	samples constitutes a valid purchase orde 'samples and shall not assume any respon plied to each project and a charge of \$5 for	ment and relinquishment of a libe liable only for the cost of charge of \$85,00 will be app	:: Signature of this docu rice. Eurofins Xenco wi ofins Xenco. A minimu
/4/1	1 U Hg: 1631 / 245.1 / 7470 / 7471	TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Sb As Ba Be Cd	LP 6010 : 8RCRA		Circle Method(s) and Metal(s) to be analyzed	le Method(s) a
J V Zn	Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U	d Ca Cr Co Cu Fe Pb Mg Mn M	Sb As Ba Be B Cd	8RCRA 13PPM Texas 11 Al Sb As Ba Be B	8RCR,	200.8 / 6020:	Total 200.7 / 6010
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NAPP2319954265	NAPP		-	15 - 1	13.25		FS02
nadent #:	Inc		XXX	15 0 1	6 25/23 13:20	0	F SO1
Sample Comments	Sar			Depth Grab/ #	Matrix Date Time Sampled Sampled		Sample Identification
NaOH+Ascorbic Acid: SAPC	NaOH+A:	_	E) H //(5,8	Corrected Temperature:		Total Containers:
Zn Acetate+NaOH: Zn		890-5162 Chain of Custody		6.0	Temperature Reading:	Yes No N/A	Sample Custody Seals:
Na ₂ S ₂ O ₃ : NaSO ₃	Na ₂ S ₂ O ₃			0.0		Yes No N/A	Cooler Custody Seals:
4: NABIS	NaHSO 4: NABIS			MOST	Thermometer ID:	ct: (Yes No	Samples Received Intact:
₽	H ₃ PO ₄ : HP		S	(yes) No	Yes No Wet Ice:	Temp Blank:	SAMPLE RECEIPT
1 ₂ NaOH:Na	H ₂ SO ₄ : H ₂						PO #:
HNO 3: HN	HCL: HC			lay received by		Manaha O	Sampler's Name:
ol MeOH: Me	Cool: Cool			* dairs	03 92541 Due Date:	32,45072,-103,92541	Project Location:
IO DI Water: H ₂ O	None: NO		Pres.	sh	X Rout	-	Project Number:
Preservative Codes	Pre	ANALYSIS REQUEST		Turn Around	Unit DUOSIEY Turn	James Ranch	Project Name:
Other:	Deliverables: EDD ADaPT	XX00 MUDIL Com Delive	Green & Ex	Garrett.	H-0852 Email:	989-8P	Phone:
TRRP Level IV	Reporting: Level III Level III PST/UST TRRP Level IV	0. NM 88220 Report	Carlsba	City, State ZIP:	NM 68220 J	Carls bad.	City, State ZIP:
1	State of Project:	State of	3104 E.	Address:	nal Parks Hinu	3122 Nahu	Address:
KRC Superiuna	am: UST/PST PRP Brownfields RRC	Program:	1201	Company Name:	TIK	FI MULLINI I	Company Name:

9/1/2023

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-5162-1 SDG Number: 03C1558161

Login Number: 5162 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	
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: 890-5162-1 SDG Number: 03C1558161

> List Source: Eurofins Midland List Creation: 08/29/23 10:38 AM

Creator: Rodriguez, Leticia

Login Number: 5162

List Number: 2

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

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<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 9/1/2023 10:35:37 AM

JOB DESCRIPTION

JAMES RANCH UNIT BOOSTER SDG NUMBER 03C1558161

JOB NUMBER

890-5174-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

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

Authorization

Generated 9/1/2023 10:35:37 AM

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

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Client: Ensolum Project/Site: JAMES RANCH UNIT BOOSTER Laboratory Job ID: 890-5174-1 SDG: 03C1558161

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Definitions/Glossary

Client: Ensolum Job ID: 890-5174-1
Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

1558161

Qualifiers

GC	VOA
Qual	lifier

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

Qualifier Description

GC Semi VOA

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

HPLC/IC

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

Glossary

EDL

LOD

LOQ

MCL

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

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDI Method Detection Limit

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)

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE)

Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level"

 NEG
 Negative / Absent

 POS
 Positive / Present

 PQL
 Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Eurofins Carlsbad

Case Narrative

Client: Ensolum

Job ID: 890-5174-1 Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

Job ID: 890-5174-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5174-1

Receipt

The samples were received on 8/28/2023 4:12 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.6°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS05 (890-5174-1), FS06 (890-5174-2), FS07 (890-5174-3) and FS08 (890-5174-4).

GC VOA

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-61603 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-61603/20).

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-61603 recovered above the upper control limit for m-Xylene & p-Xylene and o-Xylene. Another CCV was analyzed and acceptable in the method derived 12 hour period; therefore, the data was qualified and reported. The associated sample is impacted: (CCV 880-61603/51).

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-61677 and analytical batch 880-61603 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-61677 and analytical batch 880-61603 recovered outside control limits for the following analytes: m-Xylene & p-Xylene and o-Xylene. These analytes were biased high in the LCS however were acceptable in the LCSD; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS05 (890-5174-1), FS07 (890-5174-3) and FS08 (890-5174-4). Evidence of matrix interferences is not obvious.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-61574 and analytical batch 880-61588 was outside the upper control limits.

Method 8015MOD NM: Surrogate recovery for the following samples were outside control limits: (890-5168-A-1-B) and (890-5168-A-1-C MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following samples were outside control limits: FS06 (890-5174-2), FS07 (890-5174-3) and FS08 (890-5174-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-61588/20), (CCV 880-61588/31) and (CCV 880-61588/5). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-61574 and analytical batch 880-61588 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

Case Narrative

Client: Ensolum
Project/Site: JAMES RANCH UNIT BOOSTER

Job ID: 890-5174-1 SDG: 03C1558161

Job ID: 890-5174-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-61576 and analytical batch 880-61643 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. The associated samples are: FS05 (890-5174-1), FS06 (890-5174-2) and FS07 (890-5174-3).

Method 300_ORGFM_28D: The matrix spike duplicate (MSD) recoveries for preparation batch 880-61576 and analytical batch 880-61643 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The associated samples are: FS08 (890-5174-4) and (890-5174-A-4-D MSD).

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

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Job ID: 890-5174-1

Client: Ensolum Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

Lab Sample ID: 890-5174-1 **Client Sample ID: FS05** Date Collected: 08/28/23 10:20 Matrix: Solid

Date Received: 08/28/23 16:12 Sample Depth: 1.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/31/23 15:57	09/01/23 01:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/31/23 15:57	09/01/23 01:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/31/23 15:57	09/01/23 01:35	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399	mg/Kg		08/31/23 15:57	09/01/23 01:35	1
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		08/31/23 15:57	09/01/23 01:35	1
Xylenes, Total	<0.00399	U *+	0.00399	mg/Kg		08/31/23 15:57	09/01/23 01:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			08/31/23 15:57	09/01/23 01:35	1
1,4-Difluorobenzene (Surr)	69	S1-	70 - 130			08/31/23 15:57	09/01/23 01:35	1
Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/01/23 10:07	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			09/01/23 09:19	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		08/30/23 15:11	08/31/23 17:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/30/23 15:11	08/31/23 17:25	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/30/23 15:11	08/31/23 17:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	130		70 - 130			08/30/23 15:11	08/31/23 17:25	1
o-Terphenyl	111		70 - 130			08/30/23 15:11	08/31/23 17:25	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	212		4.97	mg/Kg			08/31/23 13:02	1

Client Sample ID: FS06 Lab Sample ID: 890-5174-2

Date Collected: 08/28/23 14:30 Date Received: 08/28/23 16:12

Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/31/23 15:57	09/01/23 01:56	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/31/23 15:57	09/01/23 01:56	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		08/31/23 15:57	09/01/23 01:56	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398	mg/Kg		08/31/23 15:57	09/01/23 01:56	1
o-Xylene	<0.00199	U *+	0.00199	mg/Kg		08/31/23 15:57	09/01/23 01:56	1
Xylenes, Total	<0.00398	U *+	0.00398	mg/Kg		08/31/23 15:57	09/01/23 01:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			08/31/23 15:57	09/01/23 01:56	1

Eurofins Carlsbad

Matrix: Solid

Matrix: Solid

Client Sample Results

Client: Ensolum Job ID: 890-5174-1 Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

Client Sample ID: FS06 Lab Sample ID: 890-5174-2 Date Collected: 08/28/23 14:30 Date Received: 08/28/23 16:12

Sample Depth: 3

Method: SW846 8021E	: - Volatile Organic	Compounds ((GC) (Continued)
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Surrogate	%Recovery Qu	ualifier Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	73	70 - 130	08/31/23 15:57	09/01/23 01:56	1

Method: TAI	SOP Total BTEX	- Total BTEX	Calculation
Michiga, IAL	- JOI TOTAL DIEX	- IUlai DILA	Calculation

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398 U	0.00398	mg/Kg			09/01/23 10:07	1

Mathada OMO40 0045 NM Disasi Damas Omenica (DDO) (OO	Α.
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC	. 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			09/01/23 09:19	1

	Mothod: SW046 904ED NM Diocol Dan	go Organico (DBO) (CC)	v
ı	Method: SW846 8015B NM - Diesel Ran	ge Organics (DRO) (GC)	,

		(,	(/					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6	mg/Kg		08/30/23 15:11	08/31/23 17:47	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		08/30/23 15:11	08/31/23 17:47	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		08/30/23 15:11	08/31/23 17:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	131	S1+	70 - 130	08/30/23 15:11	08/31/23 17:47	1
o-Terphenyl	112		70 - 130	08/30/23 15:11	08/31/23 17:47	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	124		4.96	mg/Kg			08/31/23 13:08	1

Client Sample ID: FS07 Lab Sample ID: 890-5174-3

Date Collected: 08/28/23 10:55 Date Received: 08/28/23 16:12

Sample Depth: 2

Mothodi	CIMOAC GOOAD	Valatile Or	ganic Compour	de (CC)
i wethod:	5W846 8U21B	- volatile Ur	danic Compour	ias (GC)

Welliou. Syvo40 602 IB - Volat	wethod: 544646 6021B - Volatile Organic Compounds (GC)										
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Benzene	<0.00202	U	0.00202	mg/Kg		08/31/23 15:57	09/01/23 02:16	1			
Toluene	<0.00202	U	0.00202	mg/Kg		08/31/23 15:57	09/01/23 02:16	1			
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		08/31/23 15:57	09/01/23 02:16	1			
m-Xylene & p-Xylene	<0.00404	U *+	0.00404	mg/Kg		08/31/23 15:57	09/01/23 02:16	1			
o-Xylene	<0.00202	U *+	0.00202	mg/Kg		08/31/23 15:57	09/01/23 02:16	1			
Xylenes, Total	<0.00404	U *+	0.00404	mg/Kg		08/31/23 15:57	09/01/23 02:16	1			
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac			
4-Bromofluorobenzene (Surr)	107		70 - 130			08/31/23 15:57	09/01/23 02:16	1			
1 4-Difluorobenzene (Surr)	67	S1-	70 - 130			08/31/23 15:57	09/01/23 02:16	1			

Method:	TΔI	SOP	Total	RTFY	- Total	RTFY	Calculation	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00404	U	0.00404	mg/Kg			09/01/23 10:07	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			09/01/23 09:19	1

Eurofins Carlsbad

Matrix: Solid

Matrix: Solid

08/31/23 13:15

Client: Ensolum Job ID: 890-5174-1

Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

Lab Sample ID: 890-5174-3 **Client Sample ID: FS07** Date Collected: 08/28/23 10:55 Date Received: 08/28/23 16:12

274

Sample Depth: 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	mg/Kg		08/30/23 15:11	08/31/23 18:08	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		08/30/23 15:11	08/31/23 18:08	1
Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		08/30/23 15:11	08/31/23 18:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	139	S1+	70 - 130			08/30/23 15:11	08/31/23 18:08	1
o-Terphenyl	120		70 - 130			08/30/23 15:11	08/31/23 18:08	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: FS08 Lab Sample ID: 890-5174-4 Matrix: Solid

4.99

mg/Kg

Date Collected: 08/28/23 14:35 Date Received: 08/28/23 16:12

Sample Depth: 3

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/31/23 15:57	09/01/23 03:39	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/31/23 15:57	09/01/23 03:39	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/31/23 15:57	09/01/23 03:39	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	mg/Kg		08/31/23 15:57	09/01/23 03:39	1
o-Xylene	<0.00201	U *+	0.00201	mg/Kg		08/31/23 15:57	09/01/23 03:39	1
Xylenes, Total	<0.00402	U *+	0.00402	mg/Kg		08/31/23 15:57	09/01/23 03:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130			08/31/23 15:57	09/01/23 03:39	1
1,4-Difluorobenzene (Surr)	73		70 - 130			08/31/23 15:57	09/01/23 03:39	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00402	U	0.00402	mg/Kg			09/01/23 10:07	1
·				mg/Kg			09/01/23 10:07	1
: Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Method: SW846 8015 NM - Diese Analyte	Range Organ	ics (DRO) (GC)	mg/Kg	<u>D</u>	Prepared	09/01/23 10:07 Analyzed	Dil Fac
: Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)		<u>D</u>	Prepared		
Method: SW846 8015 NM - Diese Analyte	Range Organ Result <50.1	ics (DRO) ((Qualifier	RL 50.1	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH	Range Organ Result <50.1 sel Range Organ	ics (DRO) ((Qualifier	RL 50.1	Unit	<u>D</u>	Prepared Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	Range Organ Result <50.1 sel Range Organ	ics (DRO) (Outline DRO) Qualifier Qualifier Qualifier	RL 50.1 (GC)	<mark>Unit</mark> mg/Kg			Analyzed 09/01/23 09:19	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10	Range Organ Result <50.1 sel Range Organ Result	ics (DRO) ((Qualifier U nics (DRO) Qualifier U	GC) RL 50.1 (GC) RL	Unit mg/Kg		Prepared	Analyzed 09/01/23 09:19 Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	Result 	ics (DRO) ((Qualifier U nics (DRO) Qualifier U	GC) RL 50.1 (GC) RL 50.1	Unit mg/Kg Unit mg/Kg		Prepared 08/30/23 15:11	Analyzed 09/01/23 09:19 Analyzed 08/31/23 18:30	Dil Fac Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 	ics (DRO) ((Qualifier U nics (DRO) Qualifier U	GC) RL 50.1 (GC) RL 50.1	Unit mg/Kg Unit mg/Kg		Prepared 08/30/23 15:11	Analyzed 09/01/23 09:19 Analyzed 08/31/23 18:30	Dil Fac Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result 	ics (DRO) ((Qualifier U nics (DRO) Qualifier U U	GC) RL 50.1 (GC) RL 50.1 50.1	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 08/30/23 15:11 08/30/23 15:11	Analyzed 09/01/23 09:19 Analyzed 08/31/23 18:30 08/31/23 18:30	Dil Fac Dil Fac 1 1 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result 	ics (DRO) ((Qualifier U nics (DRO) Qualifier U U	GC) RL 50.1 (GC) RL 50.1 50.1 50.1	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 08/30/23 15:11 08/30/23 15:11	Analyzed 09/01/23 09:19 Analyzed 08/31/23 18:30 08/31/23 18:30 08/31/23 18:30	Dil Fac Dil Fac 1

Client Sample Results

Client: Ensolum Job ID: 890-5174-1 Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

Lab Sample ID: 890-5174-4 **Client Sample ID: FS08** Matrix: Solid

Date Collected: 08/28/23 14:35 Date Received: 08/28/23 16:12

Sample Depth: 3

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
	Chloride	137	F1	5.03	mg/Kg			08/31/23 13:21	1	

Surrogate Summary

Job ID: 890-5174-1 Client: Ensolum Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance L
		BFB1	DFBZ1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
0-5171-A-1-C MS	Matrix Spike	122	106	
)-5171-A-1-D MSD	Matrix Spike Duplicate	124	108	
0-5174-1	FS05	106	69 S1-	
0-5174-2	FS06	106	73	
90-5174-3	FS07	107	67 S1-	
90-5174-4	FS08	136 S1+	73	
S 880-61677/1-A	Lab Control Sample	129	123	
CSD 880-61677/2-A	Lab Control Sample Dup	127	106	
B 880-61581/5-A	Method Blank	75	77	
IB 880-61677/5-A	Method Blank	78	80	

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	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-5168-A-1-C MS	Matrix Spike	131 S1+	102	
390-5168-A-1-D MSD	Matrix Spike Duplicate	130	100	
390-5174-1	FS05	130	111	
390-5174-2	FS06	131 S1+	112	
390-5174-3	FS07	139 S1+	120	
390-5174-4	FS08	152 S1+	131 S1+	
CS 880-61574/2-A	Lab Control Sample	109	123	
CSD 880-61574/3-A	Lab Control Sample Dup	117	122	
ИВ 880-61574/1-A	Method Blank	161 S1+	157 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-5174-1 Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-61581/5-A

Matrix: Solid

Analysis Batch: 61603

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 61581

	1110	1410						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/30/23 17:39	08/31/23 12:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/30/23 17:39	08/31/23 12:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/30/23 17:39	08/31/23 12:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/30/23 17:39	08/31/23 12:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/30/23 17:39	08/31/23 12:07	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/30/23 17:39	08/31/23 12:07	1

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prej	pared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75		70 - 130	08/30/2	23 17:39	08/31/23 12:07	1
1,4-Difluorobenzene (Surr)	77		70 - 130	08/30/2	23 17:39	08/31/23 12:07	1

Lab Sample ID: MB 880-61677/5-A

Client Sample ID: Method Blank

Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 61603	Prep Batch: 61677
MB MB	

Analyte	Result Q	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200 U	J	0.00200	mg/Kg		08/31/23 15:57	08/31/23 22:50	1
Toluene	<0.00200 U	J	0.00200	mg/Kg		08/31/23 15:57	08/31/23 22:50	1
Ethylbenzene	<0.00200 U	J	0.00200	mg/Kg		08/31/23 15:57	08/31/23 22:50	1
m-Xylene & p-Xylene	<0.00400 U	J	0.00400	mg/Kg		08/31/23 15:57	08/31/23 22:50	1
o-Xylene	<0.00200 U	J	0.00200	mg/Kg		08/31/23 15:57	08/31/23 22:50	1
Xylenes, Total	<0.00400 U	J	0.00400	mg/Kg		08/31/23 15:57	08/31/23 22:50	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepar	red	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130	08/31/23	15:57	08/31/23 22:50	1
1,4-Difluorobenzene (Surr)	80		70 - 130	08/31/23	15:57	08/31/23 22:50	1

Lab Sample ID: LCS 880-61677/1-A

Matrix: Solid

Analysis Batch: 61603

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 61677

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1148		mg/Kg		115	70 - 130	
Toluene	0.100	0.1235		mg/Kg		123	70 - 130	
Ethylbenzene	0.100	0.1217		mg/Kg		122	70 - 130	
m-Xylene & p-Xylene	0.200	0.2713	*+	mg/Kg		136	70 - 130	
o-Xvlene	0 100	0 1335	*+	ma/Ka		133	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	129	70 - 130
1.4-Difluorobenzene (Surr)	123	70 - 130

Lab Sample ID: LCSD 880-61677/2-A

Matrix: Solid

Analysis Batch: 61603

Client Sample ID: Lab	Control Sample Dup
	Dron Type, Total/NA

Prep Type: Total/NA

Prep Batch: 61677

	Бріке	LCSD LCSD				%Rec		RPD
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1039	mg/Kg		104	70 - 130	10	35

Job ID: 890-5174-1 Client: Ensolum Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

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

Lab Sample ID: LCSD 880-61677/2-A

Matrix: Solid Analysis Batch: 61603 Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 61677

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit D Toluene 0.100 0.1183 118 70 - 130 35 mg/Kg 4 Ethylbenzene 0.100 0.1175 mg/Kg 117 70 - 130 35 0.200 70 - 130 m-Xylene & p-Xylene 0.2599 mg/Kg 35 130 o-Xylene 0.100 0.1273 mg/Kg 127 70 - 130

LCSD LCSD

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	127		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 890-5171-A-1-C MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 61603

Prep Type: Total/NA

Prep Batch: 61677

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F1	0.0996	0.03830	F1	mg/Kg		37	70 - 130	
Toluene	<0.00200	U F1	0.0996	0.03580	F1	mg/Kg		36	70 - 130	
Ethylbenzene	<0.00200	U F1	0.0996	0.02974	F1	mg/Kg		30	70 - 130	
m-Xylene & p-Xylene	<0.00401	U *+ F1	0.199	0.05990	F1	mg/Kg		30	70 - 130	
o-Xylene	<0.00200	U *+ F1	0.0996	0.03096	F1	mg/Kg		31	70 - 130	

MS MS

Surrogate 4-Bromofluorobenzene (Surr)	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	122	70 - 130
1,4-Difluorobenzene (Surr)	106	70 - 130

Lab Sample ID: 890-5171-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 61603

Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U F1	0.100	0.04498	F1	mg/Kg		44	70 - 130	16	35
Toluene	<0.00200	U F1	0.100	0.03854	F1	mg/Kg		39	70 - 130	7	35
Ethylbenzene	<0.00200	U F1	0.100	0.03083	F1	mg/Kg		31	70 - 130	4	35
m-Xylene & p-Xylene	<0.00401	U *+ F1	0.200	0.06119	F1	mg/Kg		30	70 - 130	2	35
o-Xylene	<0.00200	U *+ F1	0.100	0.04314	F1	mg/Kg		43	70 - 130	33	35

MSD MSD

мв мв Result Qualifier

<50.0 U

Surrogate	%Recovery	Quaimer	Limits
4-Bromofluorobenzene (Surr)	124		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

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

Lab Sample ID: MB 880-61574/1-A

Matrix: Solid

Analysis Batch: 61588

Gasoline Range Organics

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

Prepared

08/30/23 15:11

Prep Batch: 61574

08/31/23 08:03

(GRO)-C6-C10

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RL

50.0

Unit

mg/Kg

Prep Batch: 61677

Client: Ensolum Job ID: 890-5174-1
Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

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

Lab Sample ID: MB 880-61574/1-A

Matrix: Solid

Analysis Batch: 61588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61574

	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/30/23 15:11	08/31/23 08:03	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/30/23 15:11	08/31/23 08:03	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	161	S1+	70 - 130			08/30/23 15:11	08/31/23 08:03	1
o-Terphenyl	157	S1+	70 - 130			08/30/23 15:11	08/31/23 08:03	1

Lab Sample ID: LCS 880-6157 Matrix: Solid Analysis Batch: 61588	4/2-A						Client	Sample	e ID: Lab Contro Prep Type: Prep Bate	Total/NA
			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics			1000	988.1		mg/Kg		99	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over			1000	973.8		mg/Kg		97	70 - 130	
C10-C28)										
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	109		70 - 130							
o-Terphenyl	123		70 - 130							

Matrix: Solid Prep Type: Total/NA Analysis Batch: 61588 Prep Batch: 61574 Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier %Rec Limits RPD Limit Unit D Gasoline Range Organics 1000 992.6 mg/Kg 99 70 - 130 0 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 965.7 mg/Kg 97 70 - 130 20 C10-C28)

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	122		70 - 130

131 S1+

102

Lab Sample ID: 890-5168-A-1-C MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 61588** Prep Batch: 61574 MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits <50.3 U F2 998 70 - 130 Gasoline Range Organics 1297 126 mg/Kg (GRO)-C6-C10 <50.3 U 998 1296 125 Diesel Range Organics (Over mg/Kg 70 - 130 C10-C28) MS MS Surrogate %Recovery Qualifier Limits

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Client Sample ID: Lab Control Sample Dup

70 - 130

70 - 130

1-Chlorooctane

o-Terphenyl

Lab Sample ID: LCSD 880-61574/3-A

Job ID: 890-5174-1 Client: Ensolum Project/Site: JAMES RANCH UNIT BOOSTER

SDG: 03C1558161

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

Lab Sample ID: 890-5168-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 61588

Prep Batch: 61574

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	<50.3	U F2	998	886.2	F2	mg/Kg		85	70 - 130	38	20	
(GRO)-C6-C10												
Diesel Range Organics (Over	<50.3	U	998	1291		mg/Kg		125	70 - 130	0	20	
C10 C28)												

C10-C28)

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-61576/1-A Client Sample ID: Method Blank

Prep Type: Soluble

Matrix: Solid

Analyte

Analysis Batch: 61643

мв мв Result Qualifier

Prepared Analyzed Dil Fac

Chloride <5.00 5.00 mg/Kg 08/31/23 11:25 Lab Sample ID: LCS 880-61576/2-A **Client Sample ID: Lab Control Sample**

RL

Unit

Prep Type: Soluble

Matrix: Solid

Analysis Batch: 61643

	Spike	LCS	LCS			%Rec	
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	
Chloride	250	249.3	mg/Kg		100	90 - 110	

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

Matrix: Solid

Analysis Batch: 61643

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	243.6		mg/Kg	_	97	90 - 110	2	20

Lab Sample ID: 890-5174-4 MS **Matrix: Solid**

Lab Sample ID: LCSD 880-61576/3-A

Client Sample ID: FS08

Prep Type: Soluble

Analysis Batch: 61643

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Limits Unit %Rec Chloride 90 - 110 137 F1 252 104 399.0 mg/Kg

Lab Sample ID: 890-5174-4 MSD

Client Sample ID: FS08

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 61643

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	137	F1	252	422.4	F1	mg/Kg		114	90 - 110	6	20

Client: Ensolum
Project/Site: JAMES RANCH UNIT BOOSTER

Job ID: 890-5174-1 SDG: 03C1558161

GC VOA

Prep Batch: 61581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-61581/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 61603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5174-1	FS05	Total/NA	Solid	8021B	61677
890-5174-2	FS06	Total/NA	Solid	8021B	61677
890-5174-3	FS07	Total/NA	Solid	8021B	61677
890-5174-4	FS08	Total/NA	Solid	8021B	61677
MB 880-61581/5-A	Method Blank	Total/NA	Solid	8021B	61581
MB 880-61677/5-A	Method Blank	Total/NA	Solid	8021B	61677
LCS 880-61677/1-A	Lab Control Sample	Total/NA	Solid	8021B	61677
LCSD 880-61677/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61677
890-5171-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	61677
890-5171-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	61677

Prep Batch: 61677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5174-1	FS05	Total/NA	Solid	5035	
890-5174-2	FS06	Total/NA	Solid	5035	
890-5174-3	FS07	Total/NA	Solid	5035	
890-5174-4	FS08	Total/NA	Solid	5035	
MB 880-61677/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-61677/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-61677/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5171-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-5171-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 61728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5174-1	FS05	Total/NA	Solid	Total BTEX	
890-5174-2	FS06	Total/NA	Solid	Total BTEX	
890-5174-3	FS07	Total/NA	Solid	Total BTEX	
890-5174-4	FS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 61574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5174-1	FS05	Total/NA	Solid	8015NM Prep	
890-5174-2	FS06	Total/NA	Solid	8015NM Prep	
890-5174-3	FS07	Total/NA	Solid	8015NM Prep	
890-5174-4	FS08	Total/NA	Solid	8015NM Prep	
MB 880-61574/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-61574/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-61574/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5168-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5168-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 61588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5174-1	FS05	Total/NA	Solid	8015B NM	61574

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2

3

1

5

6

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10

12

13

14

Client: Ensolum Job ID: 890-5174-1
Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

GC Semi VOA (Continued)

Analysis Batch: 61588 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5174-2	FS06	Total/NA	Solid	8015B NM	61574
890-5174-3	FS07	Total/NA	Solid	8015B NM	61574
890-5174-4	FS08	Total/NA	Solid	8015B NM	61574
MB 880-61574/1-A	Method Blank	Total/NA	Solid	8015B NM	61574
LCS 880-61574/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	61574
LCSD 880-61574/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	61574
890-5168-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	61574
890-5168-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	61574

Analysis Batch: 61747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-5174-1	FS05	Total/NA	Solid	8015 NM
890-5174-2	FS06	Total/NA	Solid	8015 NM
890-5174-3	FS07	Total/NA	Solid	8015 NM
890-5174-4	FS08	Total/NA	Solid	8015 NM

HPLC/IC

Leach Batch: 61576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5174-1	FS05	Soluble	Solid	DI Leach	
890-5174-2	FS06	Soluble	Solid	DI Leach	
890-5174-3	FS07	Soluble	Solid	DI Leach	
890-5174-4	FS08	Soluble	Solid	DI Leach	
MB 880-61576/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-61576/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-61576/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5174-4 MS	FS08	Soluble	Solid	DI Leach	
890-5174-4 MSD	FS08	Soluble	Solid	DI Leach	

Analysis Batch: 61643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5174-1	FS05	Soluble	Solid	300.0	61576
890-5174-2	FS06	Soluble	Solid	300.0	61576
890-5174-3	FS07	Soluble	Solid	300.0	61576
890-5174-4	FS08	Soluble	Solid	300.0	61576
MB 880-61576/1-A	Method Blank	Soluble	Solid	300.0	61576
LCS 880-61576/2-A	Lab Control Sample	Soluble	Solid	300.0	61576
LCSD 880-61576/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	61576
890-5174-4 MS	FS08	Soluble	Solid	300.0	61576
890-5174-4 MSD	FS08	Soluble	Solid	300.0	61576

Project/Site: JAMES RANCH UNIT BOOSTER

SDG: 03C1558161

Client Sample ID: FS05

Client: Ensolum

Date Collected: 08/28/23 10:20 Date Received: 08/28/23 16:12 Lab Sample ID: 890-5174-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	61677	08/31/23 15:57	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61603	09/01/23 01:35	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61728	09/01/23 10:07	AJ	EET MID
Total/NA	Analysis	8015 NM		1			61747	09/01/23 09:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	61574	08/30/23 15:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61588	08/31/23 17:25	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	61576	08/30/23 16:37	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61643	08/31/23 13:02	SMC	EET MID

Client Sample ID: FS06 Lab Sample ID: 890-5174-2

Date Collected: 08/28/23 14:30

Date Received: 08/28/23 16:12

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	61677	08/31/23 15:57	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61603	09/01/23 01:56	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61728	09/01/23 10:07	AJ	EET MID
Total/NA	Analysis	8015 NM		1			61747	09/01/23 09:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	61574	08/30/23 15:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61588	08/31/23 17:47	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	61576	08/30/23 16:37	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61643	08/31/23 13:08	SMC	EET MID

Client Sample ID: FS07

Date Collected: 08/28/23 10:55 Date Received: 08/28/23 16:12 Lab Sample ID: 890-5174-3

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	61677	08/31/23 15:57	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61603	09/01/23 02:16	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61728	09/01/23 10:07	AJ	EET MID
Total/NA	Analysis	8015 NM		1			61747	09/01/23 09:19	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	61574	08/30/23 15:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61588	08/31/23 18:08	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	61576	08/30/23 16:37	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61643	08/31/23 13:15	SMC	EET MID

Client Sample ID: FS08

Date Collected: 08/28/23 14:35

Date Received: 08/28/23 16:12

Lab Sa	mple	ID:	890-5174-4
			Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	61677	08/31/23 15:57	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61603	09/01/23 03:39	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61728	09/01/23 10:07	AJ	EET MID

Lab Chronicle

Client: Ensolum Job ID: 890-5174-1
Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

Client Sample ID: FS08

Lab Sample ID: 890-5174-4

Matrix: Solid

Date Collected: 08/28/23 14:35 Date Received: 08/28/23 16:12

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			61747	09/01/23 09:19	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	61574	08/30/23 15:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61588	08/31/23 18:30	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	61576	08/30/23 16:37	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61643	08/31/23 13:21	SMC	EET MID

Laboratory References:

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

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Accreditation/Certification Summary

Client: Ensolum Job ID: 890-5174-1
Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

Laboratory: Eurofins Midland

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

Authority	Pro	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-23-26	06-30-24
The following analytes	and the also dead the determinant last			
the agency does not of	' '	it the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes for
,	' '	Matrix	ed by the governing authority. This list ma	ay include analytes for
the agency does not of	fer certification.	•	, , ,	ay include analytes for

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Method Summary

Job ID: 890-5174-1 Client: Ensolum Project/Site: JAMES RANCH UNIT BOOSTER SDG: 03C1558161

otocol	Laboratory
V846	EET MID
L SOP	EET MID
V846	EET MID

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum

Project/Site: JAMES RANCH UNIT BOOSTER

Job ID: 890-5174-1

SDG: 03C1558161

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5174-1	FS05	Solid	08/28/23 10:20	08/28/23 16:12	1.5
890-5174-2	FS06	Solid	08/28/23 14:30	08/28/23 16:12	3
890-5174-3	FS07	Solid	08/28/23 10:55	08/28/23 16:12	2
890-5174-4	FS08	Solid	08/28/23 14:35	08/28/23 16:12	3

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Relinquished by: (Signature)

3

Circle Method(s) and Metal(s) to

Total 200.7 / 6010

Phone:

City, State ZIP:

Company Name: Address:

3122

Ben

Project Number:

Project Name:

Sampler's Name:

Project Location:

32 45012

SAMPLE RECEIPT

Cooler Custody Seals:

Samples Received Intact:

Total Containers: Sample Custody Seals:

Sample Identification

FSON FSON

eurofins ×m

Chain of Custody

	Fins Environment Testing Xenco	Houston, Midland, TX EL Paso, T	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	Work Order No:	
Republic		Hobbs, N	vi (575) 392-7550, Carlsbad, NM (575) 988-3199	Page 1	
		Bill to: (if different)	Gree	mn	
	Ensolum , LCC	Company Name:	6	UST/PST PRP Brownfields RRC	
PST/UST □ TRRP □ Level III □ PST/UST □ TRRP □ Level III □ Other:	National Parks	Address:	E. Green		
Preservative Code:	sbad NM 882	City, State ZIP:	73	Level III PST/UST TRRP	
Preservative Code: None: NO None: NO DI Wa Cool: Cool H ₂ SO ₄ : H ₂ NaCetate: H ₂ NaOH: Zn NaOH: Acctate: NaOH: Zn NaOH: Acctate: NaOH: Zn NaOH: Ascorbic Acid: SAP Sample Comment Sample Comment Sample Comment 15 (08211001	-854-0852	Garrett.	0	EDD ADaPT	
Cool: Cool MeOH: HCL: HC H ₂ 50 ₄ : H ₂ NaOH: H ₂ 50 ₄ : H ₂ NaOH: NaOH: Zn NaOH: Zn NaOH: Acetate+NaOH: Zn NaOH: 30 - 015 - 0		Around	ANALYSIS REQUE		
Cool: Cool MeOH: HCL: HC HNO 3: H350 4: H2 NAOH: H3PO 4: HP NAHSO 4: NABIS NA25 20 3: NASO 3 Zn Acetate+NAOH: Zn NAOH+Ascorbic Acid: SAP Sample Comment Sample Comment 15 10 82 11 201 15 10 8		sh	es.		
HCL:HC HNO; H;50;:H2 NaOH: H;50;:H2 NaOH: H;90;:HP NaHSO ;:NABIS Na25;0]:NaSO ; Zn Acetate+NaOH:Zn NaOH+Ascorbic Acid:SAP Sample Comment Sample Comment 15 \(\text{BB2} \) 11001	-103.925 41				
H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAP Sample Comment Sample Comment Sample Comment 15 \(\text{ B2 11001} \) 15 \(\text{ B2 11001} \) API: 30 \(\text{ O15} \) \(-14 \) Ben \(\text{ Belill} \): Se \(Ag SiO ₂ Na Sr TI Sn U V Zn \) Hg: 1631/245.1/7470/7471 Date/Time	ia O'Dell	e day received by eived by 4:30pm		,	
NaHSO 4: NABIS Na ₂ S ₂ O ₃ : NASO 3 Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAP Sample Comment Sample Comment COST CENTEY: 15 1082711001 1 15 1082711001 1 15 1082711001 1 API: 30-015-4 100 Ben	(Yes) No				
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Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAP Sample Comment 170Cident #: NAPP2319951 COST CENTER: 15 w8211001, 1 15 w 8211001, 1 15 w 8211001	No (N/A			Na ₂ S ₂ O ₃ : NaSO ₃	
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Sample Comment Incident #: NAPP2319951 COST CENTEY: 15 1082711001 15 1082711001 API: 30-015 - 4 109 API: 30-015 - 4 109 Ben Belill: bbelill@ensol Se Ag Sio ₂ Na Sr TI Sn U V Zn Hg: 1631/245.1/7470/7471 Date/Time	Corrected Temperature:	3.6	PH	-	
Theident #: NAPP2319951 Cost center: 15 08211001 15 08211001 API:30-015 -40 30-015-409 Ben Belill: bbelill@ensol Se Ag SiO ₂ Na Sr TI Sn U V Zn Hg:1631/245.1/7470/7471 Date/line	Matrix Date Sampled	Grab/ Comp	Cr	Sample Comments	
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30 - 015 - 4 0195, 30 - 015 - 4 0933 30 - 015 - 4 0933 Ben Behill: bbeiill@ensolum.C Se Ag SiO ₂ Na Sr Ti Sn U V Zn Hg: 1631/245.1/7470 /7471				30 015	+
Se Ag SiO ₂ Na Sr Tl Sn U V Zn Hg: 1631/245.1/7470 /7471 Date/Time				-015	
Ben Belill: bbelill@ensolum.c				-015-	
Se Ag SiO ₂ Na Sr Tl Sn U V Zn Hg: 1631/245.1/7470 / 7471 Date/Time					
Se Ag SiO ₂ Na Sr Tl Sn U V : Hg: 1631/245.1/7470/747				0	3
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aceived hy: (Signature)	nent and relinquishment of samples constitutes a vaild purchase ord be liable only for the cost of samples and shall not assume any respo	der from client company to I onsibility for any losses or ex	eurofins Xenco, its affiliates and subcontractors. It assigns standard term penses incurred by the client if such losses are due to circumstances bey	ts and conditions and the control	
ייר לייר לא הייר לי	Signatura)	0)	Date/Time Relinquished by: (Signature)	re) Received by: (Signature) Date/Time	

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-5174-1

 SDG Number: 03C1558161

Login Number: 5174 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5174-1

SDG Number: 03C1558161

List Source: Eurofins Midland List Creation: 08/30/23 10:58 AM

List Number: 2 Creator: Teel, Brianna

Login Number: 5174

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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Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 9/5/2023 5:19:11 PM

JOB DESCRIPTION

James Ranch Unit Booster SDG NUMBER 03C1558161

JOB NUMBER

890-5177-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

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

Authorization

Generated 9/5/2023 5:19:11 PM

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

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

Released to Imaging: 2/16/2024 2:53:04 PM

Client: Ensolum
Project/Site: James Ranch Unit Booster

Laboratory Job ID: 890-5177-1
SDG: 03C1558161

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Definitions/Glossary

Client: Ensolum Job ID: 890-5177-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

Qualifiers

GC VO	4
Qualifier	

Quannon	Quamer Becomption
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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.

Qualifier Description

GC Semi VOA

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

HPLC/IC

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

Glossary

MDA

RPD

Glossaly	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	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"

MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MOI	Method Quantitation Limit

NC	Not Calculated
INC	NOI Calculated

ND	Not Detected at the reporting limit (or MDL or EDL if shown)
שוו	Not betected at the reporting infin (or MDE or EDE if Showin)

Minimum Detectable Activity (Radiochemistry)

NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit

PRES	Presumptive
QC	Quality Contro

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)
TEO	Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Job ID: 890-5177-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

Job ID: 890-5177-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5177-1

Receipt

The samples were received on 8/29/2023 3:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS09 (890-5177-1), FS10 (890-5177-2), FS11 (890-5177-3), FS12 (890-5177-4), FS15 (890-5177-5), FS18 (890-5177-6), FS13 (890-5177-7), FS14 (890-5177-8), FS16 (890-5177-9), FS17 (890-5177-10), SW04 (890-5177-11), SW05 (890-5177-12), SW03 (890-5177-13), SW06 (890-5177-14), SW07 (890-5177-15), FS19 (890-5177-16), FS20 (890-5177-17) and FS21 (890-5177-18).

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-61711 and analytical batch 880-61708 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-61711/1-A), (LCSD 880-61711/2-A), (890-5177-A-1-G MS) and (890-5177-A-1-H MSD). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS09 (890-5177-1), FS11 (890-5177-3), FS15 (890-5177-5), FS18 (890-5177-6), FS13 (890-5177-7) and FS14 (890-5177-8). 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: SW04 (890-5177-11), SW05 (890-5177-12) and SW03 (890-5177-13). 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: FS19 (890-5177-16) and FS21 (890-5177-18). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The method blank for preparation batch 880-61711 and analytical batch 880-61708 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

GC Semi VOA

Method 8015MOD NM: The surrogate recovery for the blank associated with preparation batch 880-61644 and analytical batch 880-61704 was outside the upper control limits.

Method 8015MOD NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-61644 and analytical batch 880-61704 was outside control limits. Sample non-homogeneity is suspected.

Method 8015MOD NM: The continuing calibration verification (CCV) associated with batch 880-61704 recovered above the upper control limit for Gasoline Range Organics (GRO)-C6-C10. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-61704/5) and (CCV 880-61704/58).

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.

Case Narrative

Client: Ensolum Job ID: 890-5177-1 Project/Site: James Ranch Unit Booster

SDG: 03C1558161

Job ID: 890-5177-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Client Sample Results

Client: Ensolum Job ID: 890-5177-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS09

Lab Sample ID: 890-5177-1 Date Collected: 08/29/23 09:50 Matrix: Solid Date Received: 08/29/23 15:00

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 11:51	1
Toluene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 11:51	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 11:51	1
m-Xylene & p-Xylene	<0.00396	U *+	0.00396	mg/Kg		09/01/23 09:05	09/01/23 11:51	1
o-Xylene	<0.00198	U *+	0.00198	mg/Kg		09/01/23 09:05	09/01/23 11:51	1
Xylenes, Total	<0.00396	U *+	0.00396	mg/Kg		09/01/23 09:05	09/01/23 11:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			09/01/23 09:05	09/01/23 11:51	
1,4-Difluorobenzene (Surr)	58	S1-	70 - 130			09/01/23 09:05	09/01/23 11:51	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			09/05/23 17:22	1
: Method: SW846 8015 NM - Diese	•		•					
	•	ics (DRO) (GC)	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	•	Qualifier	•	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/05/23 12:35	
Analyte Total TPH	Result <50.1	Qualifier U	RL 50.1		<u>D</u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <50.1 sel Range Orga	Qualifier U	RL 50.1	mg/Kg	_ =		09/05/23 12:35	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	Result <50.1 sel Range Orga	Qualifier U nics (DRO) Qualifier	RL 50.1 (GC)	mg/Kg	<u>D</u>	Prepared	09/05/23 12:35 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <50.1 sel Range Orga	Qualifier U	RL 50.1	mg/Kg	_ =		09/05/23 12:35	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.1 sel Range Orga	Qualifier U nics (DRO) Qualifier U F2	RL 50.1 (GC)	mg/Kg	_ =	Prepared	09/05/23 12:35 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	Result <50.1 sel Range Orga Result <50.1	Qualifier U nics (DRO) Qualifier U F2	RL 50.1 (GC) RL 50.1	mg/Kg Unit mg/Kg	_ =	Prepared 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 10:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.1	Qualifier U nics (DRO) Qualifier U F2 U	RL 50.1 (GC) RL 50.1 50.1	mg/Kg Unit mg/Kg	_ =	Prepared 08/31/23 12:17 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 10:25 09/01/23 10:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.1	Qualifier U nics (DRO) Qualifier U F2 U	RL 50.1 (GC) RL 50.1 50.1 50.1	mg/Kg Unit mg/Kg	_ =	Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 10:25 09/01/23 10:25	Dil Face
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <50.1	Qualifier U nics (DRO) Qualifier U F2 U	RL 50.1 (GC) RL 50.1 50.1 50.1 Limits	mg/Kg Unit mg/Kg	_ =	Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared	09/05/23 12:35 Analyzed 09/01/23 10:25 09/01/23 10:25 09/01/23 10:25 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <50.1	Qualifier U nics (DRO) Qualifier U F2 U U Qualifier	RL 50.1 (GC) RL 50.1 50.1 50.1 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg	_ =	Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared 08/31/23 12:17	Analyzed 09/01/23 10:25 09/01/23 10:25 09/01/23 10:25 Analyzed 09/01/23 10:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U nics (DRO) Qualifier U F2 U U Qualifier	RL 50.1 (GC) RL 50.1 50.1 50.1 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg	_ =	Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared 08/31/23 12:17	Analyzed 09/01/23 10:25 09/01/23 10:25 09/01/23 10:25 Analyzed 09/01/23 10:25	Dil Fac Dil Fac 1 Dil Fac 1 Dil Fac 1 Dil Fac

Client Sample ID: FS10 Lab Sample ID: 890-5177-2

Date Collected: 08/29/23 09:55 Date Received: 08/29/23 15:00

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 12:12	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 12:12	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 12:12	1
m-Xylene & p-Xylene	<0.00403	U *+	0.00403	mg/Kg		09/01/23 09:05	09/01/23 12:12	1
o-Xylene	<0.00202	U *+	0.00202	mg/Kg		09/01/23 09:05	09/01/23 12:12	1
Xylenes, Total	<0.00403	U *+	0.00403	mg/Kg		09/01/23 09:05	09/01/23 12:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130			09/01/23 09:05	09/01/23 12:12	1

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Matrix: Solid

Lab Sample ID: 890-5177-2

Job ID: 890-5177-1

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS10

Date Collected: 08/29/23 09:55 Date Received: 08/29/23 15:00

Sample Depth: 4

Method: SW846 8021B - Volatile (Organic Compounds	(GC)	(Continued)
modification of the country to the country to	rigariio Compoundo		(Continuou)

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1.4-Difluorobenzene (Surr)	73	70 - 130	09/01/23 09:05	09/01/23 12:12	1

Mathad: TAI	COD Total DTEV	Total DTCV	Calaulatian
Wethod: IAL	SOP Total BTEX	- IOIAI DIEA	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			09/05/23 17:22	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			09/05/23 12:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4	mg/Kg		08/31/23 12:17	09/01/23 11:30	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4	mg/Kg		08/31/23 12:17	09/01/23 11:30	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		08/31/23 12:17	09/01/23 11:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96	70 - 130	08/31/23 12:17	09/01/23 11:30	1
o-Terphenyl	106	70 - 130	08/31/23 12:17	09/01/23 11:30	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	327		5.04	mg/Kg			09/01/23 16:32	1

Client Sample ID: FS11 Lab Sample ID: 890-5177-3

Date Collected: 08/29/23 10:00 Date Received: 08/29/23 15:00

Sample Depth: 4

Method: SW846	S 2021R - Volatile	Organic (Compounds	(CC)

			,					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/01/23 09:05	09/01/23 12:32	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/01/23 09:05	09/01/23 12:32	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/01/23 09:05	09/01/23 12:32	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398	mg/Kg		09/01/23 09:05	09/01/23 12:32	1
o-Xylene	< 0.00199	U *+	0.00199	mg/Kg		09/01/23 09:05	09/01/23 12:32	1
Xylenes, Total	<0.00398	U *+	0.00398	mg/Kg		09/01/23 09:05	09/01/23 12:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			09/01/23 09:05	09/01/23 12:32	1
1 1 Diffusionabanzana (Curr)	50	01	70 120			00/01/22 00:05	00/01/22 12:22	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzea	DII Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	09/01/23 09:05	09/01/23 12:32	1
1,4-Difluorobenzene (Surr)	58	S1-	70 - 130	09/01/23 09:05	09/01/23 12:32	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			09/05/23 17:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			09/05/23 12:35	1

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Matrix: Solid

Lab Sample ID: 890-5177-3

Job ID: 890-5177-1

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS11

Date Collected: 08/29/23 10:00 Date Received: 08/29/23 15:00

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.5	U	50.5	mg/Kg		08/31/23 12:17	09/01/23 11:51	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.5	U	50.5	mg/Kg		08/31/23 12:17	09/01/23 11:51	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		08/31/23 12:17	09/01/23 11:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130			08/31/23 12:17	09/01/23 11:51	1
o-Terphenyl	124		70 - 130			08/31/23 12:17	09/01/23 11:51	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Allulyto								

Client Sample ID: FS12 Lab Sample ID: 890-5177-4 Date Collected: 08/29/23 10:30 Matrix: Solid

Date Received: 08/29/23 15:00

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 12:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 12:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 12:52	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399	mg/Kg		09/01/23 09:05	09/01/23 12:52	1
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		09/01/23 09:05	09/01/23 12:52	1
Xylenes, Total	<0.00399	U *+	0.00399	mg/Kg		09/01/23 09:05	09/01/23 12:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130			09/01/23 09:05	09/01/23 12:52	1
1,4-Difluorobenzene (Surr)	71		70 - 130			09/01/23 09:05	09/01/23 12:52	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/05/23 17:22	1
Method: SW846 8015 NM - Diese	al Pange Organ	ice (DRO) ((GC)					
Method: SW846 8015 NM - Diese Analyte			•	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH		Qualifier	GC) RL 49.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/05/23 12:35	Dil Fac
Analyte Total TPH	Result <49.9	Qualifier U	RL 49.9		<u>D</u>	Prepared		
Analyte	Result <49.9 sel Range Orga	Qualifier U	RL 49.9		<u>D</u>	Prepared Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	Result <49.9 sel Range Orga	Qualifier Unics (DRO) Qualifier	RL 49.9 (GC)	mg/Kg			09/05/23 12:35	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	Result <49.9 sel Range Orga Result	Qualifier Unics (DRO) Qualifier	RL 49.9 (GC)	mg/Kg		Prepared	09/05/23 12:35 Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result <49.9 sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	RL 49.9 (GC)	mg/Kg		Prepared	09/05/23 12:35 Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9	Qualifier U nics (DRO) Qualifier U	RL 49.9 (GC) RL 49.9	mg/Kg Unit mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 12:13 09/01/23 12:13	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9 sel Range Orga Result <49.9	Qualifier U nics (DRO) Qualifier U	RL 49.9 (GC) RL 49.9	mg/Kg Unit mg/Kg		Prepared 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 12:13	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9	Qualifier U nics (DRO) Qualifier U U	RL 49.9 (GC) RL 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 12:13 09/01/23 12:13	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result	Qualifier U nics (DRO) Qualifier U U	RL 49.9 (GC) RL 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 12:13 09/01/23 12:13	1 Dil Fac 1

Eurofins Carlsbad

9/5/2023

Job ID: 890-5177-1

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS12 Lab Sample ID: 890-5177-4

Date Collected: 08/29/23 10:30 Matrix: Solid Date Received: 08/29/23 15:00

Sample Depth: 4

Method: EPA 300.0 - Anions, Ion C	hromatograp	hy - Soluble	•					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	202		4.96	mg/Kg			09/01/23 16:46	1

Client Sample ID: FS15 Lab Sample ID: 890-5177-5

Date Collected: 08/29/23 10:35 Date Received: 08/29/23 15:00

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 13:13	
Toluene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 13:13	
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 13:13	
m-Xylene & p-Xylene	<0.00396	U *+	0.00396	mg/Kg		09/01/23 09:05	09/01/23 13:13	
o-Xylene	<0.00198	U *+	0.00198	mg/Kg		09/01/23 09:05	09/01/23 13:13	
Xylenes, Total	<0.00396	U *+	0.00396	mg/Kg		09/01/23 09:05	09/01/23 13:13	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	92		70 - 130			09/01/23 09:05	09/01/23 13:13	
1,4-Difluorobenzene (Surr)	69	S1-	70 - 130			09/01/23 09:05	09/01/23 13:13	
Method: TAL SOP Total BTEX - 1	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00396	U	0.00396	mg/Kg			09/05/23 17:22	•
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.7	U	49.7	mg/Kg			09/05/23 12:35	
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	mg/Kg		08/31/23 12:17	09/01/23 12:34	•
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		08/31/23 12:17	09/01/23 12:34	
Oll Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		08/31/23 12:17	09/01/23 12:34	•
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	114		70 - 130			08/31/23 12:17	09/01/23 12:34	
	121		70 - 130			08/31/23 12:17	09/01/23 12:34	
o-Terphenyl								
o-Terphenyl : Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
	• •	hy - Solubl Qualifier	e RL	Unit	D	Prepared	Analyzed	Dil Fac

Lab Sample ID: 890-5177-6

Client: Ensolum Job ID: 890-5177-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS18

Date Collected: 08/29/23 10:40 Date Received: 08/29/23 15:00

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 13:33	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 13:33	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 13:33	1
m-Xylene & p-Xylene	<0.00404	U *+	0.00404	mg/Kg		09/01/23 09:05	09/01/23 13:33	1
o-Xylene	<0.00202	U *+	0.00202	mg/Kg		09/01/23 09:05	09/01/23 13:33	1
Xylenes, Total	<0.00404	U *+	0.00404	mg/Kg		09/01/23 09:05	09/01/23 13:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130			09/01/23 09:05	09/01/23 13:33	1
1,4-Difluorobenzene (Surr)	68	S1-	70 - 130			09/01/23 09:05	09/01/23 13:33	1
- Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			09/05/23 17:22	1
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			09/05/23 12:35	1
Method: SW846 8015B NM - Dies	I D O	! (DDO)						
	sei Rande Orda	nics (DRO)	(GC)					
Analyte	• •	Qualifier	(GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	• •	Qualifier	•	Unit mg/Kg	<u>D</u>	Prepared 08/31/23 12:17	Analyzed 09/01/23 12:56	
Gasoline Range Organics (GRO)-C6-C10	Result	Qualifier U	RL		<u>D</u>			1
	Result < 50.3	Qualifier U	RL 50.3	mg/Kg	<u>D</u>	08/31/23 12:17	09/01/23 12:56	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result < 50.3	Qualifier U	RL 50.3	mg/Kg	<u> </u>	08/31/23 12:17	09/01/23 12:56	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.3	Qualifier U U U	FL 50.3 50.3	mg/Kg	<u>D</u>	08/31/23 12:17 08/31/23 12:17	09/01/23 12:56 09/01/23 12:56	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.3 <50.3 <50.3	Qualifier U U U	FL 50.3 50.3 50.3	mg/Kg	<u>D</u>	08/31/23 12:17 08/31/23 12:17 08/31/23 12:17	09/01/23 12:56 09/01/23 12:56 09/01/23 12:56	1 1 1 <i>Dil Fac</i>
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <50.3 <50.3 <50.3 <50.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60.3 <60	Qualifier U U U	50.3 50.3 Limits	mg/Kg	<u>D</u>	08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 <i>Prepared</i>	09/01/23 12:56 09/01/23 12:56 09/01/23 12:56 Analyzed	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U U Qualifier	RL 50.3 50.3 50.3 Limits 70 - 130 70 - 130	mg/Kg	<u> </u>	08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared 08/31/23 12:17	09/01/23 12:56 09/01/23 12:56 09/01/23 12:56 Analyzed 09/01/23 12:56	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U U Qualifier	RL 50.3 50.3 50.3 Limits 70 - 130 70 - 130	mg/Kg	<u>D</u>	08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared 08/31/23 12:17	09/01/23 12:56 09/01/23 12:56 09/01/23 12:56 Analyzed 09/01/23 12:56	Dil Face 1 1 1 Dil Face 1 Dil Face

Client Sample ID: FS13

Date Collected: 08/29/23 10:45 Date Received: 08/29/23 15:00

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/01/23 09:05	09/01/23 13:54	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/01/23 09:05	09/01/23 13:54	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/01/23 09:05	09/01/23 13:54	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	mg/Kg		09/01/23 09:05	09/01/23 13:54	1
o-Xylene	<0.00201	U *+	0.00201	mg/Kg		09/01/23 09:05	09/01/23 13:54	1
Xylenes, Total	<0.00402	U *+	0.00402	mg/Kg		09/01/23 09:05	09/01/23 13:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			09/01/23 09:05	09/01/23 13:54	1

Eurofins Carlsbad

Lab Sample ID: 890-5177-7

Matrix: Solid

Client Sample Results

Client: Ensolum Job ID: 890-5177-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS13 Lab Sample ID: 890-5177-7

Date Collected: 08/29/23 10:45 Matrix: Solid Date Received: 08/29/23 15:00

Sample Depth: 4

Method: SW846 8021E	: - Volatile Organic	Compounds ((GC) (Continued)
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Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	66	S1-	70 - 130	09/01/23 09:05	09/01/23 13:54	1

Method: TAI	SOP Total BTFX -	- Total BTEX Calculation

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402 U	0.00402	ma/Ka			09/05/23 17:22	1

Mathada OMO40 0045 NM Disaal Damas Omasias (DDO) (OO	Α.
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC	. 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1	mg/Kg			09/05/23 12:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1	mg/Kg		08/31/23 12:17	09/01/23 13:17	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		08/31/23 12:17	09/01/23 13:17	1
Oll Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		08/31/23 12:17	09/01/23 13:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113	70 - 130	08/31/23 12:17	09/01/23 13:17	1
o-Terphenyl	122	70 - 130	08/31/23 12:17	09/01/23 13:17	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	403	5.02	mg/Kg			09/01/23 17:19	1

Client Sample ID: FS14 Lab Sample ID: 890-5177-8

Date Collected: 08/29/23 10:50 Date Received: 08/29/23 15:00

Sample Depth: 4

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

			,					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 14:14	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 14:14	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 14:14	1
m-Xylene & p-Xylene	<0.00403	U *+	0.00403	mg/Kg		09/01/23 09:05	09/01/23 14:14	1
o-Xylene	<0.00202	U *+	0.00202	mg/Kg		09/01/23 09:05	09/01/23 14:14	1
Xylenes, Total	<0.00403	U *+	0.00403	mg/Kg		09/01/23 09:05	09/01/23 14:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130			09/01/23 09:05	09/01/23 14:14	1
1 1 Diffuerahanzana (Curr)	60	01	70 120			00/01/22 00:05	00/01/22 11:11	4

4-Bromofluorobenzene (Surr)	91	70 - 130	09/01/23 09:05	09/01/23 14:14	1
1,4-Difluorobenzene (Surr)	69 S1-	70 - 130	09/01/23 09:05	09/01/23 14:14	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			09/05/23 17:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			09/05/23 12:35	1

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Matrix: Solid

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS14 Lab Sample ID: 890-5177-8 Date Collected: 08/29/23 10:50 Matrix: Solid

Date Received: 08/29/23 15:00 Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.4	U	50.4	mg/Kg		08/31/23 12:17	09/01/23 13:39	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.4	U	50.4	mg/Kg		08/31/23 12:17	09/01/23 13:39	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		08/31/23 12:17	09/01/23 13:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130			08/31/23 12:17	09/01/23 13:39	1
o-Terphenyl	124		70 - 130			08/31/23 12:17	09/01/23 13:39	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Ameliate	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	rtoouit							

Client Sample ID: FS16 Lab Sample ID: 890-5177-9 Date Collected: 08/29/23 10:55 Matrix: Solid

Date Received: 08/29/23 15:00

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 14:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 14:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 14:35	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399	mg/Kg		09/01/23 09:05	09/01/23 14:35	1
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		09/01/23 09:05	09/01/23 14:35	1
Xylenes, Total	<0.00399	U *+	0.00399	mg/Kg		09/01/23 09:05	09/01/23 14:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130			09/01/23 09:05	09/01/23 14:35	1
1,4-Difluorobenzene (Surr)	71		70 - 130			09/01/23 09:05	09/01/23 14:35	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/05/23 17:22	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			09/05/23 12:35	1
- Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/31/23 12:17	09/01/23 14:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/31/23 12:17	09/01/23 14:00	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/31/23 12:17	09/01/23 14:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130			08/31/23 12:17	09/01/23 14:00	1
			70 - 130					

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS16 Lab Sample ID: 890-5177-9

Date Collected: 08/29/23 10:55 Matrix: Solid Date Received: 08/29/23 15:00

Sample Depth: 4

Method: EPA 300.0 - Anions, Ion C	hromatography - Solubl	е					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1430	4.98	mg/Kg			09/01/23 17:33	1

Lab Sample ID: 890-5177-10 **Client Sample ID: FS17** Matrix: Solid

Date Collected: 08/29/23 11:00 Date Received: 08/29/23 15:00

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 14:55	
Toluene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 14:55	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 14:55	
m-Xylene & p-Xylene	<0.00397	U *+	0.00397	mg/Kg		09/01/23 09:05	09/01/23 14:55	1
o-Xylene	<0.00198	U *+	0.00198	mg/Kg		09/01/23 09:05	09/01/23 14:55	1
Xylenes, Total	<0.00397	U *+	0.00397	mg/Kg		09/01/23 09:05	09/01/23 14:55	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	100		70 - 130			09/01/23 09:05	09/01/23 14:55	1
1,4-Difluorobenzene (Surr)	93		70 - 130			09/01/23 09:05	09/01/23 14:55	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			09/05/23 17:22	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)					
	•	ics (DRO) (C	GC)	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	•	Qualifier	•	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/05/23 12:35	
Analyte Total TPH		Qualifier U	RL 49.7		<u>D</u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <49.7	Qualifier U	RL 49.7		<u>D</u>	Prepared Prepared		1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result <49.7	Qualifier Unics (DRO) Qualifier	RL 49.7 (GC)	mg/Kg			09/05/23 12:35	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.7 sel Range Orga	Qualifier U nics (DRO) Qualifier U	RL 49.7 (GC)	mg/Kg		Prepared	09/05/23 12:35 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.7 sel Range Orga Result <49.7	Qualifier U nics (DRO) Qualifier U	RL 49.7 (GC) RL 49.7	mg/Kg Unit mg/Kg		Prepared 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 14:22	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.7 sel Range Orga Result <49.7 <49.7	Qualifier U nics (DRO) Qualifier U U	RL 49.7 (GC) RL 49.7 49.7	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 14:22 09/01/23 14:22	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result	Qualifier U nics (DRO) Qualifier U U	RL 49.7 (GC) RL 49.7 49.7 49.7	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 14:22 09/01/23 14:22	Dil Face
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U nics (DRO) Qualifier U U	RL 49.7 (GC) RL 49.7 49.7 49.7 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared	Analyzed 09/01/23 14:22 09/01/23 14:22 09/01/23 14:22 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <49.7	Qualifier U nics (DRO) Qualifier U U Qualifier	RL 49.7 (GC) RL 49.7 49.7 49.7 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 14:22 09/01/23 14:22 09/01/23 14:22 Analyzed 09/01/23 14:22	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U nics (DRO) Qualifier U U Qualifier	RL 49.7 (GC) RL 49.7 49.7 49.7 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 14:22 09/01/23 14:22 09/01/23 14:22 Analyzed 09/01/23 14:22	Dil Fac

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: SW04 Lab Sample ID: 890-5177-11

Date Collected: 08/29/23 11:10 Matrix: Solid Date Received: 08/29/23 15:00

Sample Depth: 0-4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 16:47	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 16:47	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 16:47	1
m-Xylene & p-Xylene	<0.00404	U *+	0.00404	mg/Kg		09/01/23 09:05	09/01/23 16:47	1
o-Xylene	<0.00202	U *+	0.00202	mg/Kg		09/01/23 09:05	09/01/23 16:47	1
Xylenes, Total	<0.00404	U *+	0.00404	mg/Kg		09/01/23 09:05	09/01/23 16:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			09/01/23 09:05	09/01/23 16:47	1
1,4-Difluorobenzene (Surr)	59	S1-	70 - 130			09/01/23 09:05	09/01/23 16:47	1
Method: TAL SOP Total BTEX -	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			09/05/23 17:22	1
Method: SW846 8015 NM - Diese	ol Pango Organ	ice (DPO) ((ec)					
Analyte		Qualifier	•		_			
·	rtoouit	Qualifici	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6		49.6	mg/Kg	— –	Prepared	09/05/23 12:35	Dil Fac
· · · · · · · · · · · · · · · · · · ·	<49.6	U	49.6			Prepared		Dil Fac
Total TPH	<49.6	U	49.6		<u>D</u>	Prepared		1
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics	<49.6	nics (DRO) Qualifier	49.6 (GC)	mg/Kg			09/05/23 12:35	1
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<49.6 sel Range Orga Result	nics (DRO) Qualifier	49.6 (GC)	mg/Kg		Prepared	09/05/23 12:35 Analyzed	Dil Fac
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10	<49.6 sel Range Orga Result <49.6	nics (DRO) Qualifier U	49.6 (GC) RL 49.6	mg/Kg Unit mg/Kg		Prepared 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 15:05	Dil Fac
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<49.6 sel Range Orga Result <49.6 <49.6	Oualifier U	49.6 (GC) RL 49.6 49.6	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 15:05 09/01/23 15:05	1 Dil Fac
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.6 sel Range Orga Result <49.6 <49.6 <49.6	Oualifier U	49.6 (GC) RL 49.6 49.6 49.6 49.6	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 15:05 09/01/23 15:05	Dil Fac 1 1 Dil Fac Dil Fac
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<49.6 sel Range Orga Result <49.6 <49.6 <49.6 %Recovery	Oualifier U	49.6 (GC) RL 49.6 49.6 49.6 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared	Analyzed 09/01/23 15:05 09/01/23 15:05 09/01/23 15:05 Analyzed	Dil Fac
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	<49.6 sel Range Orga Result <49.6 <49.6 <49.6 <8ecovery 111 120	Oualifier U Qualifier U Qualifier	49.6 RL 49.6 49.6 49.6 49.6 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 15:05 09/01/23 15:05 Analyzed 09/01/23 15:05	1 Dil Fac 1 1
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	\$\sel \text{Range Orga} \frac{\text{Result}}{<49.6}\$ \$\sell \text{49.6}\$ \$\sell \text{49.6}\$ \$\sell \text{Recovery}\$ \$\frac{111}{120}\$ \$\text{1Chromatograph}\$	Oualifier U Qualifier U Qualifier	49.6 RL 49.6 49.6 49.6 49.6 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared 08/31/23 12:17	09/05/23 12:35 Analyzed 09/01/23 15:05 09/01/23 15:05 Analyzed 09/01/23 15:05	1 Dil Fac 1 1 1 1 Dil Fac 1

Client Sample ID: SW05 Lab Sample ID: 890-5177-12 Matrix: Solid

Date Collected: 08/29/23 11:15 Date Received: 08/29/23 15:00

Sample Depth: 0-4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/01/23 09:05	09/01/23 17:07	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/01/23 09:05	09/01/23 17:07	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/01/23 09:05	09/01/23 17:07	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	mg/Kg		09/01/23 09:05	09/01/23 17:07	1
o-Xylene	<0.00201	U *+	0.00201	mg/Kg		09/01/23 09:05	09/01/23 17:07	1
Xylenes, Total	<0.00402	U *+	0.00402	mg/Kg		09/01/23 09:05	09/01/23 17:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			09/01/23 09:05	09/01/23 17:07	1

Sample Depth: 0-4

Client: Ensolum Job ID: 890-5177-1

Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: SW05 Lab Sample ID: 890-5177-12

Date Collected: 08/29/23 11:15 **Matrix: Solid** Date Received: 08/29/23 15:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1 4-Diffuorobenzene (Surr)	53	S1-	70 130	09/01/23 09:05	09/01/23 17:07	

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	П	0.00402	ma/Ka			09/05/23 17:22	1

Method: SW846 8015 NM - Diesel Range	Organics (DRO) (GC	;)					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result Qua	alifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4 U	50.4	mg/Kg			09/05/23 12:35	1

10(4) 11 11	100.4 O	JU.4	mg/rtg	03/00/20 12.00
Method: SW846 8015B NM - Diesel Range	Organics (DRO) (G	SC)		

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.4	U	50.4	mg/Kg		08/31/23 12:17	09/01/23 15:26	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.4	U	50.4	mg/Kg		08/31/23 12:17	09/01/23 15:26	1
C10-C28)								

Oll Range Organics (Over C28-C36)	<50.4 U	50.4	mg/Kg	08/31/23 12:17	09/01/23 15:26	1

Surrogate	%Recovery Qua	alifier Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114	70 - 130	08/31/23 12:17	09/01/23 15:26	1
o-Ternhenyl	123	70 130	08/31/23 12:17	09/01/23 15:26	1

Method: EPA 300.0 - Anions, Ion Chromato	ography - Soluble				
o-Terphenyl	123	70 - 130	08/31/23 12:17	09/01/23 15:26	1
1-Offici doctane	114	70 - 130	00/31/23 12.11	09/01/23 13.20	,

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	244	5.01	mg/Kg			09/01/23 18:06	1

Lab Sample ID: 890-5177-13 **Client Sample ID: SW03**

Date Collected: 08/29/23 11:20 **Matrix: Solid** Date Received: 08/29/23 15:00

Sample Depth: 0-4

Method: SW846 8021B - Volatile O	rganic Comp	ounds (GC)				
Analyte	Result	Qualifier	RL	Unit	D	Prepared
Danzana	<0.00200	11	0.00000			00/04/22 00:0

Benzene	<0.00200 U	0.00200	mg/Kg	09/01/23 09:05 09/01/23 17:28	1
Toluene	<0.00200 U	0.00200	mg/Kg	09/01/23 09:05 09/01/23 17:28	1
Ethylbenzene	<0.00200 U	0.00200	mg/Kg	09/01/23 09:05	1
m-Xylene & p-Xylene	<0.00401 U*+	0.00401	mg/Kg	09/01/23 09:05 09/01/23 17:28	1
o-Xylene	<0.00200 U *+	0.00200	mg/Kg	09/01/23 09:05	1
Xylenes, Total	<0.00401 U*+	0.00401	mg/Kg	09/01/23 09:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130	09/01/23 09:05	09/01/23 17:28	1
1 1 Differenchemanne (Cerry)	0.1		70 120	00/04/22 00:05	00/04/02 47:00	1

4-Bromofluorobenzene (Surr)	132 S1+	70 - 130	09/01/23 09:05	09/01/23 17:28	1
1,4-Difluorobenzene (Surr)	81	70 - 130	09/01/23 09:05	09/01/23 17:28	1

Method: TAL SOP Total BTEX - To	tal BTEX Calc	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	ma/Ka			09/05/23 17:22	

Method: SW846 8015 NM - Diesel F	Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			09/05/23 12:35	1

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Analyzed

Dil Fac

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: SW03 Lab Sample ID: 890-5177-13 Matrix: Solid

Date Collected: 08/29/23 11:20 Date Received: 08/29/23 15:00

69.7

Sample Depth: 0-4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		08/31/23 12:17	09/01/23 15:48	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		08/31/23 12:17	09/01/23 15:48	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/31/23 12:17	09/01/23 15:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane			70 - 130			08/31/23 12:17	09/01/23 15:48	1
o-Terphenyl	121		70 - 130			08/31/23 12:17	09/01/23 15:48	1

Client Sample ID: SW06 Lab Sample ID: 890-5177-14 Date Collected: 08/29/23 11:30 Matrix: Solid

5.02

mg/Kg

Date Received: 08/29/23 15:00

Sample Depth: 0-4

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 17:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 17:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 17:48	1
m-Xylene & p-Xylene	<0.00400	U *+	0.00400	mg/Kg		09/01/23 09:05	09/01/23 17:48	1
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		09/01/23 09:05	09/01/23 17:48	1
Xylenes, Total	<0.00400	U *+	0.00400	mg/Kg		09/01/23 09:05	09/01/23 17:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130			09/01/23 09:05	09/01/23 17:48	1
1,4-Difluorobenzene (Surr)	89		70 - 130			09/01/23 09:05	09/01/23 17:48	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			09/05/23 17:22	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2	mg/Kg			09/05/23 12:35	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2	mg/Kg		08/31/23 12:17	09/01/23 16:10	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2	mg/Kg		08/31/23 12:17	09/01/23 16:10	1
Oll Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		08/31/23 12:17	09/01/23 16:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130			08/31/23 12:17	09/01/23 16:10	1
						08/31/23 12:17	09/01/23 16:10	1

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09/01/23 18:13

9/5/2023

Job ID: 890-5177-1

Client: Ensolum Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: SW06 Lab Sample ID: 890-5177-14 Date Collected: 08/29/23 11:30 Matrix: Solid

Date Received: 08/29/23 15:00

Sample Depth: 0-4

Method: EPA 300.0 - Anions, Ion Ch	romatography - S	oluble					
Analyte	Result Qualific	er RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	123	5.05	mg/Kg			09/01/23 18:33	1

Client Sample ID: SW07 Lab Sample ID: 890-5177-15

Date Collected: 08/29/23 11:35 Date Received: 08/29/23 15:00

Sample Depth: 0-4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		09/01/23 09:05	09/01/23 18:09	1
Toluene	< 0.00199	U	0.00199	mg/Kg		09/01/23 09:05	09/01/23 18:09	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		09/01/23 09:05	09/01/23 18:09	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398	mg/Kg		09/01/23 09:05	09/01/23 18:09	1
o-Xylene	< 0.00199	U *+	0.00199	mg/Kg		09/01/23 09:05	09/01/23 18:09	1
Xylenes, Total	<0.00398	U *+	0.00398	mg/Kg		09/01/23 09:05	09/01/23 18:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130			09/01/23 09:05	09/01/23 18:09	1
1,4-Difluorobenzene (Surr)	73		70 - 130			09/01/23 09:05	09/01/23 18:09	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/05/23 17:22	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			09/05/23 12:35	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3	mg/Kg		08/31/23 12:17	09/01/23 16:31	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3	mg/Kg		08/31/23 12:17	09/01/23 16:31	1
Oll Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		08/31/23 12:17	09/01/23 16:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130			08/31/23 12:17	09/01/23 16:31	1
o-Terphenyl	120		70 - 130			08/31/23 12:17	09/01/23 16:31	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Method: EPA 300.0 - Anions, Ion Analyte	• •	hy - Solubl Qualifier	e RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample Results

Client: Ensolum Job ID: 890-5177-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS19 Lab Sample ID: 890-5177-16

Date Collected: 08/29/23 12:30
Date Received: 08/29/23 15:00

Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 18:29	1
Toluene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 18:29	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		09/01/23 09:05	09/01/23 18:29	1
m-Xylene & p-Xylene	< 0.00396	U *+	0.00396	mg/Kg		09/01/23 09:05	09/01/23 18:29	1
o-Xylene	<0.00198	U *+	0.00198	mg/Kg		09/01/23 09:05	09/01/23 18:29	1
Xylenes, Total	<0.00396	U *+	0.00396	mg/Kg		09/01/23 09:05	09/01/23 18:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130			09/01/23 09:05	09/01/23 18:29	1
1,4-Difluorobenzene (Surr)	79		70 - 130			09/01/23 09:05	09/01/23 18:29	1
Method: TAL SOP Total BTEX -	Total BTEX Cal	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			09/05/23 17:22	1
Method: SW846 8015 NM - Diese	al Range Organ	ics (DRO) ((30)					
Analyte		Qualifier	RL RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			09/05/23 12:35	1
Method: SW846 8015B NM - Die	sel Range Orga	nics (DRO)	(CC)					
			(GC)					
Analyte	• •	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	• •	Qualifier	• •	Unit mg/Kg	<u>D</u>	Prepared 08/31/23 12:17	Analyzed 09/01/23 16:53	
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U	RL		<u>D</u>			1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.5	Qualifier U	RL 50.5	mg/Kg	<u> </u>	08/31/23 12:17	09/01/23 16:53	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate	Result <50.5	Qualifier U U U	FL 50.5	mg/Kg	<u>D</u>	08/31/23 12:17 08/31/23 12:17	09/01/23 16:53 09/01/23 16:53	1 1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.5 <50.5 <50.5	Qualifier U U U	FL 50.5 50.5 50.5	mg/Kg	<u>D</u>	08/31/23 12:17 08/31/23 12:17 08/31/23 12:17	09/01/23 16:53 09/01/23 16:53 09/01/23 16:53	1 1 1 1 Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result	Qualifier U U U	8L 50.5 50.5 50.5 <i>Limits</i>	mg/Kg	<u>D</u>	08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 <i>Prepared</i>	09/01/23 16:53 09/01/23 16:53 09/01/23 16:53 Analyzed	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U U Qualifier	RL 50.5 50.5 50.5 Limits 70 - 130 70 - 130	mg/Kg	<u>D</u>	08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared 08/31/23 12:17	09/01/23 16:53 09/01/23 16:53 09/01/23 16:53 Analyzed 09/01/23 16:53	Dil Fac 1 Dil Fac 1 Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U U Qualifier	RL 50.5 50.5 50.5 Limits 70 - 130 70 - 130	mg/Kg	<u>D</u>	08/31/23 12:17 08/31/23 12:17 08/31/23 12:17 Prepared 08/31/23 12:17	09/01/23 16:53 09/01/23 16:53 09/01/23 16:53 Analyzed 09/01/23 16:53	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Client Sample ID: FS20

Date Collected: 08/29/23 13:00 Date Received: 08/29/23 15:00

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/01/23 09:05	09/01/23 18:50	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/01/23 09:05	09/01/23 18:50	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/01/23 09:05	09/01/23 18:50	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	mg/Kg		09/01/23 09:05	09/01/23 18:50	1
o-Xylene	<0.00201	U *+	0.00201	mg/Kg		09/01/23 09:05	09/01/23 18:50	1
Xylenes, Total	<0.00402	U *+	0.00402	mg/Kg		09/01/23 09:05	09/01/23 18:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130			09/01/23 09:05	09/01/23 18:50	

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Lab Sample ID: 890-5177-17

Matrix: Solid

Lab Sample ID: 890-5177-17

Client Sample Results

Client: Ensolum Job ID: 890-5177-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS20

Date Collected: 08/29/23 13:00 Date Received: 08/29/23 15:00

Sample Depth: 4

Method: SW846 8021B	- Volatile Org	anic Compounds	(GC)	(Continued)
MELITOU. SYVONO OUZ ID	- Volatile Org	ariic compounds	1001	(Continueu)

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	84	70 - 130	09/01/23 09:05	09/01/23 18:50	1

Mathad: TAI	COD Total DTEV	Total DTCV	Calaulatian
Wethod: IAL	SOP Total BTEX	- IOIAI DIEA	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/05/23 17:22	1

Analyte	Result Q	ualifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.5 U	49.5	mg/Kg			09/05/23 12:35	1

Method: SW846 8015B NM - Diesel Range Organics	(DRO)	(GC)	١
motified. Offerto College Ithin Biodol Rungo Organico	(5.10)	, , , , ,	,

		,	\ <i>\</i>					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.5	U	49.5	mg/Kg		08/31/23 12:17	09/01/23 17:14	1
Diesel Range Organics (Over C10-C28)	<49.5	U	49.5	mg/Kg		08/31/23 12:17	09/01/23 17:14	1
Oll Range Organics (Over C28-C36)	<49.5	U	49.5	mg/Kg		08/31/23 12:17	09/01/23 17:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	109	70 - 130	08/31/23 12:17	09/01/23 17:14	1
o-Terphenyl	116	70 - 130	08/31/23 12:17	09/01/23 17:14	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	277		5.03	mg/Kg			09/01/23 18:53	1

Client Sample ID: FS21 Lab Sample ID: 890-5177-18 Matrix: Solid

Date Collected: 08/29/23 13:05 Date Received: 08/29/23 15:00

Sample Depth: 4

Method: SW846 8021B -	M-1-4!1- O	0 (00)

momous official social	no organio comp	Janua (Ja	,					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 19:10	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 19:10	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/01/23 09:05	09/01/23 19:10	1
m-Xylene & p-Xylene	<0.00403	U *+	0.00403	mg/Kg		09/01/23 09:05	09/01/23 19:10	1
o-Xylene	<0.00202	U *+	0.00202	mg/Kg		09/01/23 09:05	09/01/23 19:10	1
Xylenes, Total	<0.00403	U *+	0.00403	mg/Kg		09/01/23 09:05	09/01/23 19:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			09/01/23 09:05	09/01/23 19:10	1
1 4 Diffuorabanzana (Surr)	66	01	70 120			00/01/22 00:05	00/01/22 10:10	1

Surrogate	%Recovery Quality	er Limits	Prepared	Anaiyzea	DII Fac
4-Bromofluorobenzene (Surr)	94	70 - 130	09/01/23 09:05	09/01/23 19:10	1
1,4-Difluorobenzene (Surr)	66 S1-	70 - 130	09/01/23 09:05	09/01/23 19:10	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00403	U	0.00403	mg/Kg			09/05/23 17:22	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2	mg/Kg			09/05/23 12:35	1

Client Sample Results

Client: Ensolum Job ID: 890-5177-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS21 Lab Sample ID: 890-5177-18

Date Collected: 08/29/23 13:05 Matrix: Solid
Date Received: 08/29/23 15:00

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.2	U	50.2	mg/Kg		08/31/23 12:17	09/01/23 17:36	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.2	U	50.2	mg/Kg		08/31/23 12:17	09/01/23 17:36	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		08/31/23 12:17	09/01/23 17:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			08/31/23 12:17	09/01/23 17:36	1
o-Terphenyl	109		70 - 130			08/31/23 12:17	09/01/23 17:36	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
			5.04	mg/Kg			09/01/23 19:00	

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Surrogate Summary

Client: Ensolum Job ID: 890-5177-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limit
		BFB1	DFBZ1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-5177-1	FS09	95	58 S1-	
90-5177-1 MS	FS09	134 S1+	119	
90-5177-1 MSD	FS09	136 S1+	116	
0-5177-2	FS10	97	73	
90-5177-3	FS11	100	58 S1-	
90-5177-4	FS12	96	71	
90-5177-5	FS15	92	69 S1-	
90-5177-6	FS18	92	68 S1-	
90-5177-7	FS13	95	66 S1-	
0-5177-8	FS14	91	69 S1-	
0-5177-9	FS16	125	71	
90-5177-10	FS17	100	93	
90-5177-11	SW04	99	59 S1-	
0-5177-12	SW05	101	53 S1-	
0-5177-13	SW03	132 S1+	81	
0-5177-14	SW06	89	89	
0-5177-15	SW07	88	73	
90-5177-16	FS19	131 S1+	79	
90-5177-17	FS20	129	84	
90-5177-18	FS21	94	66 S1-	
CS 880-61711/1-A	Lab Control Sample	133 S1+	118	
CSD 880-61711/2-A	Lab Control Sample Dup	137 S1+	112	
B 880-61711/5-A	Method Blank	75	79	

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

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

Matrix: Solid Prep Type: Total/NA

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-5177-1	FS09	100	110
890-5177-1 MS	FS09	98	98
890-5177-1 MSD	FS09	114	112
890-5177-2	FS10	96	106
890-5177-3	FS11	113	124
890-5177-4	FS12	96	106
890-5177-5	FS15	114	121
890-5177-6	FS18	112	118
890-5177-7	FS13	113	122
890-5177-8	FS14	114	124
890-5177-9	FS16	114	124
890-5177-10	FS17	112	122
890-5177-11	SW04	111	120
890-5177-12	SW05	114	123
890-5177-13	SW03	112	121
890-5177-14	SW06	96	104

Surrogate Summary

Client: Ensolum
Project/Site: James Ranch Unit Booster
Job ID: 890-5177-1
SDG: 03C1558161

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-5177-15	SW07	111	120	
890-5177-16	FS19	107	114	
890-5177-17	FS20	109	116	
890-5177-18	FS21	100	109	
LCS 880-61644/2-A	Lab Control Sample	77	91	
LCSD 880-61644/3-A	Lab Control Sample Dup	77	91	
MB 880-61644/1-A	Method Blank	139 S1+	157 S1+	
Surrogate Legend				
1CO = 1-Chlorooctane				
OTPH = o-Terphenyl				

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Client: Ensolum Job ID: 890-5177-1 SDG: 03C1558161 Project/Site: James Ranch Unit Booster

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-61711/5-A

Matrix: Solid Analysis Batch: 61708 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 61711

MB			MB											
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac					
	Benzene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 11:29	1					
	Toluene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 11:29	1					
	Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 11:29	1					
	m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/01/23 09:05	09/01/23 11:29	1					
	o-Xylene	<0.00200	U	0.00200	mg/Kg		09/01/23 09:05	09/01/23 11:29	1					
	Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/01/23 09:05	09/01/23 11:29	1					
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Surrogate	%Recovery 0	Qualifier Limi	ts	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75	70 -	730	9/01/23 09:05	09/01/23 11:29	1
1.4-Difluorobenzene (Surr)	79	70 -	130	9/01/23 09:05	09/01/23 11:29	1

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 880-61711/1-A

Matrix: Solid

Analysis Batch: 61708

Prep Type: Total/NA

Prep Batch: 61711

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09874	-	mg/Kg		99	70 - 130	
Toluene	0.100	0.1122		mg/Kg		112	70 - 130	
Ethylbenzene	0.100	0.1163		mg/Kg		116	70 - 130	
m-Xylene & p-Xylene	0.200	0.2616	*+	mg/Kg		131	70 - 130	
o-Xylene	0.100	0.1268		mg/Kg		127	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130
1,4-Difluorobenzene (Surr)	118		70 - 130

Lab Sample ID: LCSD 880-61711/2-A

Matrix: Solid

Analysis Batch: 61708

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 61711

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.09906		mg/Kg		99	70 - 130	0	35	
Toluene	0.100	0.1184		mg/Kg		118	70 - 130	5	35	
Ethylbenzene	0.100	0.1238		mg/Kg		124	70 - 130	6	35	
m-Xylene & p-Xylene	0.200	0.2789	*+	mg/Kg		139	70 - 130	6	35	
o-Xylene	0.100	0.1355	*+	mg/Kg		135	70 - 130	7	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	137	S1+	70 - 130
1.4-Difluorobenzene (Surr)	112		70 - 130

Lab Sample ID: 890-5177-1 MS

Matrix: Solid

Analysis Batch: 61708

Client Sample ID: FS09 Prep Type: Total/NA

Prep Batch: 61711

-	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00198	U	0.0996	0.08969		mg/Kg		89	70 - 130	
Toluene	<0.00198	U	0.0996	0.1086		mg/Kg		109	70 - 130	

QC Sample Results

Client: Ensolum Job ID: 890-5177-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

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

Lab Sample ID: 890-5177-1 MS

Matrix: Solid

Analysis Batch: 61708

Client Sample ID: FS09 Prep Type: Total/NA

Prep Batch: 61711

Sample	Sample	Spike	MS	MS				%Rec
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
<0.00198	U	0.0996	0.1124		mg/Kg		113	70 - 130
<0.00396	U *+	0.199	0.2501		mg/Kg		126	70 - 130
<0.00198	U *+	0.0996	0.1198		mg/Kg		120	70 - 130
	Result <0.00198 <0.00396	Result Qualifier	Result Qualifier Added	Result Qualifier Added Result <0.00198	Result Qualifier Added Result Qualifier <0.00198	Result Qualifier Added Added Result Qualifier Unit Miles <0.00198	Result Qualifier Added Result Qualifier Unit D <0.00198	Result Qualifier Added Result Qualifier Unit D %Rec <0.00198

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	134	S1+	70 - 130
1,4-Difluorobenzene (Surr)	119		70 - 130

Lab Sample ID: 890-5177-1 MSD

Matrix: Solid

Analysis Batch: 61708

Prep Type: Total/NA

Prep Batch: 61711

		Sample	Sample	Spike	MSD	MSD				%Rec		RPD
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
	Benzene	<0.00198	U	0.100	0.08921		mg/Kg		88	70 - 130	1	35
	Toluene	<0.00198	U	0.100	0.1049		mg/Kg		105	70 - 130	3	35
	Ethylbenzene	<0.00198	U	0.100	0.1096		mg/Kg		109	70 - 130	3	35
	m-Xylene & p-Xylene	<0.00396	U *+	0.200	0.2475		mg/Kg		124	70 - 130	1	35
	o-Xylene	<0.00198	U *+	0.100	0.1191		mg/Kg		119	70 - 130	1	35
١												

MSD MSD

MB MB

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130
1,4-Difluorobenzene (Surr)	116		70 - 130

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

Lab Sample ID: MB 880-61644/1-A

Matrix: Solid

Analysis Batch: 61704

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 61644

Result Qualifier RL Unit Prepared Analyzed Dil Fac Analyte Gasoline Range Organics 50.0 08/31/23 12:17 09/01/23 07:51 <50.0 U mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 50.0 08/31/23 12:17 09/01/23 07:51 <50.0 U mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 08/31/23 12:17 09/01/23 07:51 mg/Kg

MB MB

Limits %Recovery Qualifier Prepared Analyzed Dil Fac Surrogate 70 - 130 1-Chlorooctane 139 S1+ 08/31/23 12:17 09/01/23 07:51 o-Terphenyl 157 S1+ 70 - 130 08/31/23 12:17 09/01/23 07:51

Lab Sample ID: LCS 880-61644/2-A

Matrix: Solid

Analysis Batch: 61704

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

Prep Batch: 61644

Spike LCS LCS %Rec Added Qualifier Analyte Result Unit %Rec Limits 1000 82 70 - 130 Gasoline Range Organics 818 4 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 812.8 mg/Kg 81 70 - 130 C10-C28)

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Job ID: 890-5177-1 Client: Ensolum Project/Site: James Ranch Unit Booster

SDG: 03C1558161

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

LCS LCS

Lab Sample ID: LCS 880-61644/2-A **Matrix: Solid**

Analysis Batch: 61704

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 61644

Lab Sample ID: LCSD 880-61644/3-A

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 77 70 - 130 o-Terphenyl 91 70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 61644

Analysis Batch: 61704 Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 1000 835.7 84 70 - 1302 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 814.7 81 mg/Kg 70 - 1300 20

C10-C28)

Matrix: Solid

LCSD LCSD Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 77 91 70 - 130 o-Terphenyl

Lab Sample ID: 890-5177-1 MS **Client Sample ID: FS09 Matrix: Solid**

Prep Type: Total/NA **Analysis Batch: 61704** Prep Batch: 61644

Sample Sample MS MS Spike Analyte Added Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <50.1 U F2 991 832.9 mg/Kg 80 70 - 130

(GRO)-C6-C10 Diesel Range Organics (Over <50.1 U 991 958.1 mg/Kg 93 70 - 130

C10-C28)

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

Lab Sample ID: 890-5177-1 MSD Client Sample ID: FS09

Matrix: Solid Prep Type: Total/NA Analysis Batch: 61704 Prep Batch: 61644

Sample Sample MSD MSD %Rec RPD Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit Gasoline Range Organics U F2 991 1042 F2 <50.1 101 70 - 130 22 20 mg/Kg (GRO)-C6-C10

1114

mg/Kg

109

70 - 130

991

Diesel Range Organics (Over C10-C28)

MSD MSD Qualifier Surrogate %Recovery Limits 1-Chlorooctane 114 70 - 130 112 70 - 130 o-Terphenyl

<50.1 U

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Client Sample ID: Method Blank

Prep Type: Soluble

Prep Type: Soluble

Client Sample ID: FS09

Client Sample ID: FS09

Client Sample ID: SW04

Client Sample ID: SW04

Prep Type: Soluble

Prep Type: Soluble

Prep Type: Soluble

Prep Type: Soluble

Job ID: 890-5177-1

Client: Ensolum SDG: 03C1558161 Project/Site: James Ranch Unit Booster

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-61635/1-A

Matrix: Solid

Analysis Batch: 61688

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Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			09/01/23 15:52	1

Lab Sample ID: LCS 880-61635/2-A **Client Sample ID: Lab Control Sample Matrix: Solid**

Analysis Batch: 61688

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	248.3		ma/Ka		99	90 - 110	

Lab Sample ID: LCSD 880-61635/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 61688

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	247.3		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-5177-1 MS

Matrix: Solid

Analysis Batch: 61688

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	915		250	1160		mg/Kg	_	98	90 - 110	

Lab Sample ID: 890-5177-1 MSD

Matrix: Solid

Analysis Batch: 61688

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	915		250	1154		mg/Kg		96	90 - 110	1	20	

Lab Sample ID: 890-5177-11 MS

Matrix: Solid

Analysis Batch: 61688

-	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	265		248	517 /		malKa		102	00 110	

Lab Sample ID: 890-5177-11 MSD

Matrix: Solid

Analysis Batch: 61688

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	265		248	515.3		mg/Kg		101	90 - 110	0	20	

QC Association Summary

Client: Ensolum Job ID: 890-5177-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

GC VOA

Analysis Batch: 61708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5177-1	FS09	Total/NA	Solid	8021B	61711
890-5177-2	FS10	Total/NA	Solid	8021B	61711
890-5177-3	FS11	Total/NA	Solid	8021B	61711
890-5177-4	FS12	Total/NA	Solid	8021B	61711
890-5177-5	FS15	Total/NA	Solid	8021B	61711
890-5177-6	FS18	Total/NA	Solid	8021B	61711
890-5177-7	FS13	Total/NA	Solid	8021B	61711
890-5177-8	FS14	Total/NA	Solid	8021B	61711
890-5177-9	FS16	Total/NA	Solid	8021B	61711
890-5177-10	FS17	Total/NA	Solid	8021B	61711
890-5177-11	SW04	Total/NA	Solid	8021B	61711
890-5177-12	SW05	Total/NA	Solid	8021B	61711
890-5177-13	SW03	Total/NA	Solid	8021B	61711
890-5177-14	SW06	Total/NA	Solid	8021B	61711
890-5177-15	SW07	Total/NA	Solid	8021B	61711
890-5177-16	FS19	Total/NA	Solid	8021B	61711
890-5177-17	FS20	Total/NA	Solid	8021B	61711
890-5177-18	FS21	Total/NA	Solid	8021B	61711
MB 880-61711/5-A	Method Blank	Total/NA	Solid	8021B	61711
LCS 880-61711/1-A	Lab Control Sample	Total/NA	Solid	8021B	61711
LCSD 880-61711/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61711
890-5177-1 MS	FS09	Total/NA	Solid	8021B	61711
890-5177-1 MSD	FS09	Total/NA	Solid	8021B	61711

Prep Batch: 61711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5177-1	FS09	Total/NA	Solid	5035	
890-5177-2	FS10	Total/NA	Solid	5035	
890-5177-3	FS11	Total/NA	Solid	5035	
890-5177-4	FS12	Total/NA	Solid	5035	
890-5177-5	FS15	Total/NA	Solid	5035	
890-5177-6	FS18	Total/NA	Solid	5035	
890-5177-7	FS13	Total/NA	Solid	5035	
890-5177-8	FS14	Total/NA	Solid	5035	
890-5177-9	FS16	Total/NA	Solid	5035	
890-5177-10	FS17	Total/NA	Solid	5035	
890-5177-11	SW04	Total/NA	Solid	5035	
890-5177-12	SW05	Total/NA	Solid	5035	
890-5177-13	SW03	Total/NA	Solid	5035	
890-5177-14	SW06	Total/NA	Solid	5035	
890-5177-15	SW07	Total/NA	Solid	5035	
890-5177-16	FS19	Total/NA	Solid	5035	
890-5177-17	FS20	Total/NA	Solid	5035	
890-5177-18	FS21	Total/NA	Solid	5035	
MB 880-61711/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-61711/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-61711/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5177-1 MS	FS09	Total/NA	Solid	5035	
890-5177-1 MSD	FS09	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum Project/Site: James Ranch Unit Booster Job ID: 890-5177-1

SDG: 03C1558161

GC VOA

Analysis Batch: 61856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5177-1	FS09	Total/NA	Solid	Total BTEX	
890-5177-2	FS10	Total/NA	Solid	Total BTEX	
890-5177-3	FS11	Total/NA	Solid	Total BTEX	
890-5177-4	FS12	Total/NA	Solid	Total BTEX	
890-5177-5	FS15	Total/NA	Solid	Total BTEX	
890-5177-6	FS18	Total/NA	Solid	Total BTEX	
890-5177-7	FS13	Total/NA	Solid	Total BTEX	
890-5177-8	FS14	Total/NA	Solid	Total BTEX	
890-5177-9	FS16	Total/NA	Solid	Total BTEX	
890-5177-10	FS17	Total/NA	Solid	Total BTEX	
890-5177-11	SW04	Total/NA	Solid	Total BTEX	
890-5177-12	SW05	Total/NA	Solid	Total BTEX	
890-5177-13	SW03	Total/NA	Solid	Total BTEX	
890-5177-14	SW06	Total/NA	Solid	Total BTEX	
890-5177-15	SW07	Total/NA	Solid	Total BTEX	
890-5177-16	FS19	Total/NA	Solid	Total BTEX	
890-5177-17	FS20	Total/NA	Solid	Total BTEX	
890-5177-18	FS21	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 61644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-5177-1	FS09	Total/NA	Solid	8015NM Prep	
890-5177-2	FS10	Total/NA	Solid	8015NM Prep	
890-5177-3	FS11	Total/NA	Solid	8015NM Prep	
890-5177-4	FS12	Total/NA	Solid	8015NM Prep	
890-5177-5	FS15	Total/NA	Solid	8015NM Prep	
890-5177-6	FS18	Total/NA	Solid	8015NM Prep	
890-5177-7	FS13	Total/NA	Solid	8015NM Prep	
890-5177-8	FS14	Total/NA	Solid	8015NM Prep	
890-5177-9	FS16	Total/NA	Solid	8015NM Prep	
890-5177-10	FS17	Total/NA	Solid	8015NM Prep	
890-5177-11	SW04	Total/NA	Solid	8015NM Prep	
890-5177-12	SW05	Total/NA	Solid	8015NM Prep	
890-5177-13	SW03	Total/NA	Solid	8015NM Prep	
890-5177-14	SW06	Total/NA	Solid	8015NM Prep	
890-5177-15	SW07	Total/NA	Solid	8015NM Prep	
390-5177-16	FS19	Total/NA	Solid	8015NM Prep	
890-5177-17	FS20	Total/NA	Solid	8015NM Prep	
890-5177-18	FS21	Total/NA	Solid	8015NM Prep	
MB 880-61644/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
_CS 880-61644/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-61644/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5177-1 MS	FS09	Total/NA	Solid	8015NM Prep	
890-5177-1 MSD	FS09	Total/NA	Solid	8015NM Prep	

Analysis Batch: 61704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5177-1	FS09	Total/NA	Solid	8015B NM	61644
890-5177-2	FS10	Total/NA	Solid	8015B NM	61644

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QC Association Summary

Client: Ensolum Job ID: 890-5177-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

GC Semi VOA (Continued)

Analysis Batch: 61704 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5177-3	FS11	Total/NA	Solid	8015B NM	61644
890-5177-4	FS12	Total/NA	Solid	8015B NM	61644
890-5177-5	FS15	Total/NA	Solid	8015B NM	61644
890-5177-6	FS18	Total/NA	Solid	8015B NM	61644
890-5177-7	FS13	Total/NA	Solid	8015B NM	61644
890-5177-8	FS14	Total/NA	Solid	8015B NM	61644
890-5177-9	FS16	Total/NA	Solid	8015B NM	61644
890-5177-10	FS17	Total/NA	Solid	8015B NM	61644
890-5177-11	SW04	Total/NA	Solid	8015B NM	61644
890-5177-12	SW05	Total/NA	Solid	8015B NM	61644
890-5177-13	SW03	Total/NA	Solid	8015B NM	61644
890-5177-14	SW06	Total/NA	Solid	8015B NM	61644
890-5177-15	SW07	Total/NA	Solid	8015B NM	61644
890-5177-16	FS19	Total/NA	Solid	8015B NM	61644
890-5177-17	FS20	Total/NA	Solid	8015B NM	61644
890-5177-18	FS21	Total/NA	Solid	8015B NM	61644
MB 880-61644/1-A	Method Blank	Total/NA	Solid	8015B NM	61644
LCS 880-61644/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	61644
LCSD 880-61644/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	61644
890-5177-1 MS	FS09	Total/NA	Solid	8015B NM	61644
890-5177-1 MSD	FS09	Total/NA	Solid	8015B NM	61644

Analysis Batch: 61819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-5177-1	FS09	Total/NA	Solid	8015 NM	
890-5177-2	FS10	Total/NA	Solid	8015 NM	
890-5177-3	FS11	Total/NA	Solid	8015 NM	
890-5177-4	FS12	Total/NA	Solid	8015 NM	
890-5177-5	FS15	Total/NA	Solid	8015 NM	
890-5177-6	FS18	Total/NA	Solid	8015 NM	
890-5177-7	FS13	Total/NA	Solid	8015 NM	
890-5177-8	FS14	Total/NA	Solid	8015 NM	
890-5177-9	FS16	Total/NA	Solid	8015 NM	
890-5177-10	FS17	Total/NA	Solid	8015 NM	
890-5177-11	SW04	Total/NA	Solid	8015 NM	
890-5177-12	SW05	Total/NA	Solid	8015 NM	
890-5177-13	SW03	Total/NA	Solid	8015 NM	
890-5177-14	SW06	Total/NA	Solid	8015 NM	
890-5177-15	SW07	Total/NA	Solid	8015 NM	
890-5177-16	FS19	Total/NA	Solid	8015 NM	
890-5177-17	FS20	Total/NA	Solid	8015 NM	
890-5177-18	FS21	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 61635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5177-1	FS09	Soluble	Solid	DI Leach	
890-5177-2	FS10	Soluble	Solid	DI Leach	
890-5177-3	FS11	Soluble	Solid	DI Leach	
890-5177-4	FS12	Soluble	Solid	DI Leach	

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QC Association Summary

Client: EnsolumJob ID: 890-5177-1Project/Site: James Ranch Unit BoosterSDG: 03C1558161

HPLC/IC (Continued)

Leach Batch: 61635 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5177-5	FS15	Soluble	Solid	DI Leach	
890-5177-6	FS18	Soluble	Solid	DI Leach	
890-5177-7	FS13	Soluble	Solid	DI Leach	
890-5177-8	FS14	Soluble	Solid	DI Leach	
890-5177-9	FS16	Soluble	Solid	DI Leach	
890-5177-10	FS17	Soluble	Solid	DI Leach	
890-5177-11	SW04	Soluble	Solid	DI Leach	
890-5177-12	SW05	Soluble	Solid	DI Leach	
890-5177-13	SW03	Soluble	Solid	DI Leach	
890-5177-14	SW06	Soluble	Solid	DI Leach	
890-5177-15	SW07	Soluble	Solid	DI Leach	
890-5177-16	FS19	Soluble	Solid	DI Leach	
890-5177-17	FS20	Soluble	Solid	DI Leach	
890-5177-18	FS21	Soluble	Solid	DI Leach	
MB 880-61635/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-61635/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-61635/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5177-1 MS	FS09	Soluble	Solid	DI Leach	
890-5177-1 MSD	FS09	Soluble	Solid	DI Leach	
890-5177-11 MS	SW04	Soluble	Solid	DI Leach	
890-5177-11 MSD	SW04	Soluble	Solid	DI Leach	

Analysis Batch: 61688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5177-1	FS09	Soluble	Solid	300.0	61635
890-5177-2	FS10	Soluble	Solid	300.0	61635
890-5177-3	FS11	Soluble	Solid	300.0	61635
890-5177-4	FS12	Soluble	Solid	300.0	6163
890-5177-5	FS15	Soluble	Solid	300.0	61635
890-5177-6	FS18	Soluble	Solid	300.0	61635
890-5177-7	FS13	Soluble	Solid	300.0	6163
890-5177-8	FS14	Soluble	Solid	300.0	6163
890-5177-9	FS16	Soluble	Solid	300.0	6163
890-5177-10	FS17	Soluble	Solid	300.0	6163
890-5177-11	SW04	Soluble	Solid	300.0	6163
890-5177-12	SW05	Soluble	Solid	300.0	6163
890-5177-13	SW03	Soluble	Solid	300.0	6163
890-5177-14	SW06	Soluble	Solid	300.0	6163
890-5177-15	SW07	Soluble	Solid	300.0	6163
890-5177-16	FS19	Soluble	Solid	300.0	6163
890-5177-17	FS20	Soluble	Solid	300.0	6163
890-5177-18	FS21	Soluble	Solid	300.0	6163
MB 880-61635/1-A	Method Blank	Soluble	Solid	300.0	6163
LCS 880-61635/2-A	Lab Control Sample	Soluble	Solid	300.0	6163
LCSD 880-61635/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	6163
890-5177-1 MS	FS09	Soluble	Solid	300.0	6163
890-5177-1 MSD	FS09	Soluble	Solid	300.0	6163
890-5177-11 MS	SW04	Soluble	Solid	300.0	6163
890-5177-11 MSD	SW04	Soluble	Solid	300.0	61635

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13

Job ID: 890-5177-1 Client: Ensolum

Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS09 Lab Sample ID: 890-5177-1 Date Collected: 08/29/23 09:50

Matrix: Solid Date Received: 08/29/23 15:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 11:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 10:25	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 16:12	СН	EET MID

Lab Sample ID: 890-5177-2 **Client Sample ID: FS10**

Date Collected: 08/29/23 09:55 Date Received: 08/29/23 15:00

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Prep 5035 61711 Total/NA 4.96 g 5 mL 09/01/23 09:05 EL EET MID Total/NA 8021B 5 mL 61708 09/01/23 12:12 **EET MID** Analysis 1 5 mL MNR Total/NA Total BTEX 61856 09/05/23 17:22 SM Analysis 1 **EET MID** Total/NA Analysis 8015 NM 61819 09/05/23 12:35 SM **EET MID** Total/NA 61644 08/31/23 12:17 EET MID Prep 8015NM Prep 9.92 g 10 mL TKC Total/NA Analysis 8015B NM 1 uL 1 uL 61704 09/01/23 11:30 SM **EET MID** Soluble 08/31/23 11:05 Leach DI Leach 4.96 g 50 mL 61635 SMC EET MID Soluble Analysis 300.0 1 61688 09/01/23 16:32 СН **EET MID**

Lab Sample ID: 890-5177-3 **Client Sample ID: FS11**

Date Collected: 08/29/23 10:00 Date Received: 08/29/23 15:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 12:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 11:51	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 16:39	CH	EET MID

Client Sample ID: FS12 Lab Sample ID: 890-5177-4

Date Collected: 08/29/23 10:30 **Matrix: Solid** Date Received: 08/29/23 15:00

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 12:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID

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Matrix: Solid

Matrix: Solid

Client: Ensolum

Project/Site: James Ranch Unit Booster

SDG: 03C1558161

Job ID: 890-5177-1

Client Sample ID: FS12

Date Collected: 08/29/23 10:30 Date Received: 08/29/23 15:00

Lab Sample ID: 890-5177-4

Matrix: Solid

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 12:13	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 16:46	CH	EET MID

Client Sample ID: FS15 Lab Sample ID: 890-5177-5

Date Collected: 08/29/23 10:35 Date Received: 08/29/23 15:00

Batch Batch Dil Initial Final Batch Prepared Prep Type Method Amount Amount Number or Analyzed Type Run Factor Analyst Lab Total/NA 5035 Prep 5.05 g 5 mL 61711 09/01/23 09:05 EL **EET MID** Total/NA Analysis 8021B 5 mL 5 mL 61708 09/01/23 13:13 MNR EET MID 1 Total/NA Total BTEX Analysis 1 61856 09/05/23 17:22 SM **EET MID** Total/NA Analysis 8015 NM 61819 09/05/23 12:35 SM EET MID Total/NA Prep 8015NM Prep 10.06 g 10 mL 61644 08/31/23 12:17 TKC **EET MID** Total/NA Analysis 8015B NM 1 uL 1 uL 61704 09/01/23 12:34 SM **EET MID** Soluble Leach DI Leach 4.95 g 50 mL 61635 08/31/23 11:05 SMC EET MID Soluble Analysis 300.0 1 61688 09/01/23 16:53 СН **EET MID**

Client Sample ID: FS18 Lab Sample ID: 890-5177-6 Date Collected: 08/29/23 10:40 **Matrix: Solid**

Date Received: 08/29/23 15:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 13:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 12:56	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 17:13	CH	EET MID

Client Sample ID: FS13 Lab Sample ID: 890-5177-7

Date Collected: 08/29/23 10:45 Date Received: 08/29/23 15:00

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 13:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	9.99 g 1 uL	10 mL 1 uL	61644 61704	08/31/23 12:17 09/01/23 13:17	TKC SM	EET MID EET MID

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Matrix: Solid

Client: Ensolum Job ID: 890-5177-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: FS13 Lab Sample ID: 890-5177-7

Date Collected: 08/29/23 10:45
Date Received: 08/29/23 15:00
Matrix: Solid

Batch Batch Dil Initial Final Batch Prepared Method Prep Type Туре Run Factor Amount Amount Number or Analyzed Analyst Lab Soluble DI Leach 61635 SMC Leach 4.98 g 50 mL 08/31/23 11:05 EET MID 300.0 Soluble Analysis 1 61688 09/01/23 17:19 СН **EET MID**

Client Sample ID: FS14 Lab Sample ID: 890-5177-8

Date Collected: 08/29/23 10:50 Matrix: Solid

Date Received: 08/29/23 15:00

Released to Imaging: 2/16/2024 2:53:04 PM

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 14:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 13:39	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		5			61688	09/01/23 17:26	CH	EET MID

Client Sample ID: FS16 Lab Sample ID: 890-5177-9

Date Collected: 08/29/23 10:55

Date Received: 08/29/23 15:00

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 14:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 14:00	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 17:33	CH	EET MID

Client Sample ID: FS17 Lab Sample ID: 890-5177-10

Date Collected: 08/29/23 11:00
Date Received: 08/29/23 15:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 14:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 14:22	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 17:39	CH	EET MID

Eurofins Carlsbad

Matrix: Solid

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Project/Site: James Ranch Unit Booster

SDG: 03C1558161

Client Sample ID: SW04

Client: Ensolum

Date Collected: 08/29/23 11:10 Date Received: 08/29/23 15:00

Lab Sample ID: 890-5177-11

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 16:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 15:05	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 17:46	CH	EET MID

Lab Sample ID: 890-5177-12

Date Collected: 08/29/23 11:15

Matrix: Solid

Date Received: 08/29/23 15:00

Client Sample ID: SW05

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Prep 5035 61711 Total/NA 4.98 g 5 mL 09/01/23 09:05 EL EET MID Total/NA 8021B 5 mL 61708 09/01/23 17:07 **EET MID** Analysis 1 5 mL MNR Total/NA Total BTEX 61856 09/05/23 17:22 SM Analysis **EET MID** 1 Total/NA Analysis 8015 NM 61819 09/05/23 12:35 SM **EET MID** Total/NA 61644 Prep 8015NM Prep 9.93 g 10 mL 08/31/23 12:17 TKC EET MID Total/NA Analysis 8015B NM 1 uL 1 uL 61704 09/01/23 15:26 SM **EET MID** Soluble 08/31/23 11:05 Leach DI Leach 4.99 g 50 mL 61635 SMC **EET MID** Soluble Analysis 300.0 61688 09/01/23 18:06 СН **EET MID**

Lab Sample ID: 890-5177-13 **Client Sample ID: SW03**

Date Collected: 08/29/23 11:20 Date Received: 08/29/23 15:00

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 17:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 15:48	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 18:13	CH	EET MID

Client Sample ID: SW06

Date Collected: 08/29/23 11:30

Date Received: 08/29/23 15:00

Lab	Sample	ID:	890-5177-14

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 17:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID

Eurofins Carlsbad

Client: Ensolum

Project/Site: James Ranch Unit Booster

Lab Sample ID: 890-5177-14

Client Sample ID: SW06 Date Collected: 08/29/23 11:30

Matrix: Solid

Job ID: 890-5177-1

SDG: 03C1558161

Date Received: 08/29/23 15:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 16:10	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 18:33	CH	EET MID

Client Sample ID: SW07 Lab Sample ID: 890-5177-15

Date Collected: 08/29/23 11:35 **Matrix: Solid** Date Received: 08/29/23 15:00

Batch Batch Dil Initial Final Batch Prepared Method Prep Type Amount Amount Number or Analyzed Type Run Factor Analyst Lab Total/NA 5035 Prep 5.03 g 5 mL 61711 09/01/23 09:05 EL **EET MID** Total/NA Analysis 8021B 5 mL 5 mL 61708 09/01/23 18:09 MNR EET MID 1 Total/NA Total BTEX 09/05/23 17:22 **EET MID** Analysis 1 61856 SM Total/NA Analysis 8015 NM 61819 09/05/23 12:35 SM EET MID 1 9.94 g Total/NA Prep 8015NM Prep 10 mL 61644 08/31/23 12:17 TKC **EET MID** Total/NA Analysis 8015B NM 1 uL 1 uL 61704 09/01/23 16:31 SM **EET MID** Soluble Leach DI Leach 5.01 g 50 mL 61635 08/31/23 11:05 SMC EET MID Soluble Analysis 300.0 1 61688 09/01/23 18:39 СН **EET MID**

Client Sample ID: FS19 Lab Sample ID: 890-5177-16

Date Collected: 08/29/23 12:30 **Matrix: Solid** Date Received: 08/29/23 15:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 18:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 16:53	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 18:46	CH	EET MID

Client Sample ID: FS20 Lab Sample ID: 890-5177-17

Date Collected: 08/29/23 13:00 **Matrix: Solid** Date Received: 08/29/23 15:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 18:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 17:14	SM	EET MID

Eurofins Carlsbad

Client: Ensolum

Project/Site: James Ranch Unit Booster

Job ID: 890-5177-1

SDG: 03C1558161

Client Sample ID: FS20 Lab Sample ID: 890-5177-17

Date Collected: 08/29/23 13:00 Matrix: Solid
Date Received: 08/29/23 15:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 18:53	CH	EET MID

Client Sample ID: FS21 Lab Sample ID: 890-5177-18

Date Collected: 08/29/23 13:05 Matrix: Solid

Date Received: 08/29/23 15:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	61711	09/01/23 09:05	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61708	09/01/23 19:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			61856	09/05/23 17:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			61819	09/05/23 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	61644	08/31/23 12:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61704	09/01/23 17:36	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	61635	08/31/23 11:05	SMC	EET MID
Soluble	Analysis	300.0		1			61688	09/01/23 19:00	CH	EET MID

Laboratory References:

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

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Accreditation/Certification Summary

Client: Ensolum
Project/Site: James Ranch Unit Booster
Job ID: 890-5177-1
SDG: 03C1558161

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-23-26	06-30-24
The following analytes	are included in this report, bu	it the laboratory is not certific	ed by the governing authority. This list ma	av include analytes for
the agency does not of	fer certification.	,	, gg,	.,
the agency does not of Analysis Method	fer certification. Prep Method	Matrix	Analyte	,
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Method Summary

Client: Ensolum Project/Site: James Ranch Unit Booster Job ID: 890-5177-1

SDG: 03C1558161

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

Sample Summary

Client: Ensolum

Project/Site: James Ranch Unit Booster

Job ID: 890-5177-1 SDG: 03C1558161

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5177-1	FS09	Solid	08/29/23 09:50	08/29/23 15:00	4
890-5177-2	FS10	Solid	08/29/23 09:55	08/29/23 15:00	4
890-5177-3	FS11	Solid	08/29/23 10:00	08/29/23 15:00	4
890-5177-4	FS12	Solid	08/29/23 10:30	08/29/23 15:00	4
890-5177-5	FS15	Solid	08/29/23 10:35	08/29/23 15:00	4
890-5177-6	FS18	Solid	08/29/23 10:40	08/29/23 15:00	4
890-5177-7	FS13	Solid	08/29/23 10:45	08/29/23 15:00	4
890-5177-8	FS14	Solid	08/29/23 10:50	08/29/23 15:00	4
890-5177-9	FS16	Solid	08/29/23 10:55	08/29/23 15:00	4
890-5177-10	FS17	Solid	08/29/23 11:00	08/29/23 15:00	4
890-5177-11	SW04	Solid	08/29/23 11:10	08/29/23 15:00	0-4
890-5177-12	SW05	Solid	08/29/23 11:15	08/29/23 15:00	0-4
890-5177-13	SW03	Solid	08/29/23 11:20	08/29/23 15:00	0-4
890-5177-14	SW06	Solid	08/29/23 11:30	08/29/23 15:00	0-4
890-5177-15	SW07	Solid	08/29/23 11:35	08/29/23 15:00	0-4
890-5177-16	FS19	Solid	08/29/23 12:30	08/29/23 15:00	3
890-5177-17	FS20	Solid	08/29/23 13:00	08/29/23 15:00	4
890-5177-18	FS21	Solid	08/29/23 13:05	08/29/23 15:00	4

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Page.

www.xenco.com

Work Order No:

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334

Environment Testing

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Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Chain of Custody

Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296

Revised Date: 08/25/2020 Rev. 2020.2

OM

15:002

8-29-23

Date/Time

Received by: (Signature)

Relinquished by: (Signature)

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1508311001 API:30-015-46194 horlille ensolum. Reporting: Level III Level III PST/UST TRRP Level IV Superfund DI Water: H2O VAPP 231095 4205 30-015-40195 20-015 46933 Ben Belili: HNO 3: HN MeOH: Me NaOH: Na NaOH+Ascorbic Acid: SAPC Sample Comments Preservative Codes Date/Time 150827100 Zn Acetate+NaOH: Zn COST CONTEX 1508271001 RRC Includint # Na25203: NaSO 3 Other: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Tl Sn U V Zn NaHSO 4: NABIS Hg: 1631 / 245.1 / 7470 / 7471 UST/PST ☐ PRP ☐ Brownfields ☐ H3PO 4: HP None: NO H2504.H2 Cool: Cool Work Order Comments HCL: HC ADaPT 🗆 Received by: (Signature) EDO State of Project: Deliverables: Program: TCLP/SPLP6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U of Eurofins Xenco. Aminimum 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 nego votice: 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 freewise. 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 ANALYSIS REQUEST Relinquished by: (Signature) 890-5177 Chain of Custody Carlsbad, NM 88220 t Email: GARRETT. GREAT @ EXXDONNOBIL COM Greene Sarrett Green XTO ENERGL BIEX Hdl さいと C PIONIGES Cont Pres. Code # of Parameters Bill to: (if different) Company Name: Comp Grab/ . 92541 Due Date: 5 Clays TN19-00 City, State ZIP: TAT starts the day received by the lab, if received by 4:30pm S S -02 77.6 9.2 Rush Address: Depth **Turn Around** 1 10:30 10.38 20:19 10.45 10:55 11:00 00:01 10:50 Routine Corrected Temperature: 9:55 d:50 Wet Ice: Sampled Temperature Reading: TIme 3122 National Parks Hwy Correction Factor: Thermometer ID: NM 88226 ames Ranch Unit Booster 8/29/23 969- 854 - 0852 (Yes) No Sampled Date Circle Method(s) and Metal(s) to be analyzed Mariaha O'Del 0361558101 32.45072.-103 Matrix Belil N/A Yes No (N/A, Temp Blank: 200.8 / 6020: Ensolvm, (Yes) No arlsbad Yes No Ben Sample Identification Samples Received Intact: Total 200.7 / 6010 Sample Custody Seals: Cooler Custody Seals: SAMPLE RECEIPT FS13 FS18 FS15 Project Number: Fotal Containers: FSID Project Location: Project Manager: Company Name: sampler's Name: FSII City, State ZIP: Project Name: FSI Address: # O d

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

🛟 eurofins

Chain of Custody

Revrsed Date: 08/25/2020 Rev. 2020.

Date/Time

Received by: (Signature)

Relinquished by: (Signature)

Date/Time -29.23

Received by: (Signature)

Relinquished by: (Signature)

15:00

Ensolum LLC 5122 National Park Cavisbad, NM 88; G89-854-0852 James Ranch Unit-Bust 03C15581101 32.45072-103 92547	EL Paso, The Hobbs, NN Hobbs, NN Company Name: Address: City, State ZIP: CTGVYPETT. Around Around Final Ctg And As	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199 ifferent) (137YPP+ (37PPP)	THOS OSHAX MAMM	6
Ensolum, LLC 3122 National Parks Carlsbad, NM 882 089 - 854 - 0852 lames Ranch Unit Buss 03C1558101 32.45012, -103 92544	Bill to: (if different) Company Name: Address: City, State ZIP: CJAYTRHIL (Around Ar	(35) 392-7550, Carrispace, Nint (35) 908-3199	ECO COURT ANNAMA	6
Ensolum LLC 3122 National Park Cav Isbad, NM 88; G89-854-0852 James Ranch Unit Boos 03C15581101 32.45072-103 92547	Bill to: (if different) Company Name: Address: City, State ZIP: CJQVYPETT. (Around Around Pro Around Aroun		***********	rage to on to
5122 National Parki Carlsbad, NM 887 989-854-0852 James Ranch Unit Bust 03C1558101 32.45012-103 92544	Address: City, State ZIP: CJQYYRPH; Around Around Rosh SAJAJS day received by day received by eavy eavy 4:30pm		Work Order Comments	nments
3122 National Parki Cay Isbad, NM 882 G894 - 854 - 0852 James Ranch Unit Boos 03C1558101 32.45012,-103 92544	Address: City, State ZIP: Around Around Class Codyrectived by 430pm Tes No	XTOEnerau	Program: UST/PST PRP Brow	Brownfields ☐ RRC ☐ Superfund ☐
Car Libad, NM 887 1989 - 854 - 0852 James Ranch Unit Boos 03C15581101 32.45072 - 103 92547 Mayiaha O'Dell	City, State ZIP: Around Around Pro Challed Cody received by Res No	3114 E. Greene St	State of Project:	
989-854-0852 James Ranch Unit Buss 03(155810) 32.45012,-103 92544	Around Programment Company Com	ode	Reporting: Level II Level III P.	PST/UST TRRP Level IV
James Ranch Unit Boos 03C15581161 32.45072-103 925476 Maviaha O'Dell	Around Rush Adv received by Evered by 4:30pm	Srean @ Exxon Mobil - com	Deliverables: EDD ☐ ADaPT ☐	r 🗆 Other:
03(155810) 32.45072,-103 9254	Flush S day S eday received by eleved by 4:30pm	ANALYSIS REQUEST	EST	Preservative Codes
32.45072-103 92547 Maviaha 0'Dell	5 daWS eday received by eleved by 4:30pm Tes No	و ن		None: NO DI Water: H ₂ O
Maviaha O'Dell	e day received by elived by 4:30pm			Cool: Cool MeOH: Me
	Yes No			H₂SO 4: H₂ NaOH: Na
SAMPLE RECEIP! Temp Blank: Yes No Wet Ice:				H ₃ PO ₄ : HP
Samples Received Intact: Yes No Thermometer 1D:		50		NaHSO 4: NABIS
Yes No N/A	e a	מ		Na 2 S 2 O 3: Na SO 3
: Yes No MYA		X		Zn Acetate+NaOH: Zn
\		317		NaOH+Ascorbic Acid: SAPC
Sample Identification Matrix Sampled Sampled	Depth Grab/ # of	B. L		Sample Comments
63	· h-0 (XXX		incident #:
SW05	5 0-4' C 1			NAPP2319954205
SW03	0 0-4' 0			Cost Center:
SIMO10 11:36	5 0-4° C			1508271001, 1508
	5 0-4, 6 1			15082 71001
519	3' C 1			API:30-015-46194
20 13.00	1 4, 6 1			30-015-46195
121 4 4 13:05	5 4' C	> >		
			19	Ben Belill:
				Obelille ensolum.
Total 200.7 / 6010 200.8 / 6020: 8RCRA 13	13PPM Texas 11 Al	Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K	Mn Mo Ni K Se Ag SiO ₂ Na Sr Tl Sn U V Zn	ri Sn U V Zn
nd Metal(s) to be analyzed	/ SPLP 6010 : 8RCRA	TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	e Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471	7470 / 7471

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-5177-1

 SDG Number: 03C1558161

Login Number: 5177 List Source: Eurofins Carlsbad

List Number: 1

Creator: Lopez, Abraham

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

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5177-1

SDG Number: 03C1558161

List Source: Eurofins Midland List Creation: 08/31/23 10:49 AM

List Number: 2 Creator: Rodriguez, Leticia

Login Number: 5177

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

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Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 8/30/2023 9:53:45 AM

JOB DESCRIPTION

James Ranch Unit Booster SDG NUMBER 03C1558161

JOB NUMBER

890-5154-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

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

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

Authorization

Generated 8/30/2023 9:53:45 AM

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

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Client: Ensolum Laboratory Job ID: 890-5154-1 Project/Site: James Ranch Unit Booster

SDG: 03C1558161

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Definitions/Glossary

Job ID: 890-5154-1 Client: Ensolum Project/Site: James Ranch Unit Booster

SDG: 03C1558161

Qualifiers

GC VOA

Qualifier **Qualifier Description** LCS and/or LCSD is outside acceptance limits, high biased. 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. 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 Contains No Free Liquid **CNF** Duplicate Error Ratio (normalized absolute difference) DER Dil Fac **Dilution Factor** Detection Limit (DoD/DOE) DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

ML MPN

DLC

EDL

LOD

LOQ MCL

MDA

MDC

Method Detection Limit MDL Minimum Level (Dioxin) Most Probable Number MOI Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

Decision Level Concentration (Radiochemistry)

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

Minimum Detectable Activity (Radiochemistry)

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE) Limit of Quantitation (DoD/DOE)

NEG Negative / Absent POS Positive / Present **Practical Quantitation Limit PQL**

PRES Presumptive **Quality Control** QC

Relative Error Ratio (Radiochemistry) **RER**

Reporting Limit or Requested Limit (Radiochemistry) RL

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

Toxicity Equivalent Factor (Dioxin) TEF Toxicity Equivalent Quotient (Dioxin) **TEQ**

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Project/Site: James Ranch Unit Booster

Job ID: 890-5154-1

SDG: 03C1558161

Job ID: 890-5154-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5154-1

Receipt

The samples were received on 8/24/2023 3:22 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BH01 (890-5154-1), BH02 (890-5154-2) and BH03 (890-5154-3).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-61493/1-A) and (LCSD 880-61493/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-5154-A-1-D MSD). 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: BH01 (890-5154-1) and BH03 (890-5154-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-61425 recovered above the upper control limit for m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-61425/20).

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-61493 and analytical batch 880-61425 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD NM: The surrogate recovery for the blank associated with preparation batch 880-61196 and analytical batch 880-61237 was outside the upper control limits.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: (CCV 880-61237/5). Evidence of matrix interferences is not obvious.

Method 8015MOD NM: The continuing calibration verification (CCV) associated with batch 880-61237 recovered below the lower control limit for Diesel Range Organics (Over C10-C28). An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-61237/20).

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

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

Matrix: Solid

Lab Sample ID: 890-5154-1

Client: Ensolum Job ID: 890-5154-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: BH01

Date Collected: 08/24/23 11:05 Date Received: 08/24/23 15:22

Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		08/29/23 16:37	08/29/23 22:20	1
Toluene	<0.00198	U	0.00198	mg/Kg		08/29/23 16:37	08/29/23 22:20	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		08/29/23 16:37	08/29/23 22:20	1
m-Xylene & p-Xylene	<0.00397	U *+	0.00397	mg/Kg		08/29/23 16:37	08/29/23 22:20	1
o-Xylene	<0.00198	U *+	0.00198	mg/Kg		08/29/23 16:37	08/29/23 22:20	1
Xylenes, Total	<0.00397	U *+	0.00397	mg/Kg		08/29/23 16:37	08/29/23 22:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			08/29/23 16:37	08/29/23 22:20	1
1,4-Difluorobenzene (Surr)	65	S1-	70 - 130			08/29/23 16:37	08/29/23 22:20	1
- Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00397	U	0.00397	mg/Kg			08/30/23 09:53	1
Method: SW846 8015 NM - Diese Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			08/28/23 23:37	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte								
	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	Result <49.8		• •	Mnit mg/Kg	D	Prepared 08/28/23 10:53	Analyzed 08/28/23 18:48	
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over		U	RL		<u>D</u>	<u>·</u>		1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<49.8 <49.8	U	49.8 49.8	mg/Kg	<u>D</u>	08/28/23 10:53 08/28/23 10:53	08/28/23 18:48 08/28/23 18:48	1
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	RL 49.8	mg/Kg	<u> </u>	08/28/23 10:53	08/28/23 18:48	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.8 <49.8 <49.8 %Recovery	U U	### ### ##############################	mg/Kg	<u>D</u>	08/28/23 10:53 08/28/23 10:53 08/28/23 10:53 Prepared	08/28/23 18:48 08/28/23 18:48 08/28/23 18:48 Analyzed	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<49.8 <49.8 <49.8	U U	49.8 49.8 49.8	mg/Kg	<u>D</u>	08/28/23 10:53 08/28/23 10:53 08/28/23 10:53	08/28/23 18:48 08/28/23 18:48 08/28/23 18:48	1 1 1 <i>Dil Fac</i>
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<49.8 <49.8 <49.8 %Recovery	U U	### ### ##############################	mg/Kg	<u> </u>	08/28/23 10:53 08/28/23 10:53 08/28/23 10:53 Prepared	08/28/23 18:48 08/28/23 18:48 08/28/23 18:48 Analyzed	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	<49.8 <49.8 <49.8 **Recovery 126 97 Chromatograp	U U Qualifier	RL 49.8 49.8 49.8 Limits 70 - 130 70 - 130	mg/Kg	_ =	08/28/23 10:53 08/28/23 10:53 08/28/23 10:53 Prepared 08/28/23 10:53	08/28/23 18:48 08/28/23 18:48 08/28/23 18:48 Analyzed 08/28/23 18:48	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	<49.8 <49.8 <49.8 **Recovery 126 97 Chromatograp	U U U Qualifier	RL 49.8 49.8 49.8 Limits 70 - 130 70 - 130	mg/Kg	<u>D</u>	08/28/23 10:53 08/28/23 10:53 08/28/23 10:53 Prepared 08/28/23 10:53	08/28/23 18:48 08/28/23 18:48 08/28/23 18:48 Analyzed 08/28/23 18:48	Dil Face 1 1 1 Dil Face Dil Face Dil Face

Client Sample ID: BH02

Date Collected: 08/24/23 12:03 Date Received: 08/24/23 15:22

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/29/23 16:37	08/29/23 22:40	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/29/23 16:37	08/29/23 22:40	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/29/23 16:37	08/29/23 22:40	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	mg/Kg		08/29/23 16:37	08/29/23 22:40	1
o-Xylene	<0.00201	U *+	0.00201	mg/Kg		08/29/23 16:37	08/29/23 22:40	1
Xylenes, Total	<0.00402	U *+	0.00402	mg/Kg		08/29/23 16:37	08/29/23 22:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	<i></i>		70 - 130			08/29/23 16:37	08/29/23 22:40	1

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Lab Sample ID: 890-5154-2

Matrix: Solid

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Job ID: 890-5154-1

Client: Ensolum SDG: 03C1558161 Project/Site: James Ranch Unit Booster

Client Sample ID: BH02 Lab Sample ID: 890-5154-2 Matrix: Solid

Date Collected: 08/24/23 12:03 Date Received: 08/24/23 15:22

Sample Depth: 4

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

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	76	70 _ 130	08/29/23 16:37	08/29/23 22:40	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/30/23 09:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2	mg/Kg			08/28/23 23:37	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	<50.2	U	50.2	mg/Kg		08/28/23 10:53	08/28/23 19:10	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2	mg/Kg		08/28/23 10:53	08/28/23 19:10	1
Oll Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		08/28/23 10:53	08/28/23 19:10	1
Surrogato	%Pacayany	Qualifier	l imite			Propared	Analyzed	Dil Eac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	127	70 - 130	08/28/23 10:53	08/28/23 19:10	1
o-Terphenyl	99	70 - 130	08/28/23 10:53	08/28/23 19:10	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	396		5.03	mg/Kg			08/30/23 00:06	1

Client Sample ID: BH03 Lab Sample ID: 890-5154-3 **Matrix: Solid**

Date Collected: 08/24/23 13:15 Date Received: 08/24/23 15:22

Sample Depth: 1

Markland, CIMO 40 00	21B - Volatile Organic	O
IVIATOON' SVVXAN XII	21B - Volatile Circanic	L.Omnollings (Lat.)

			,					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/29/23 16:37	08/29/23 23:01	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/29/23 16:37	08/29/23 23:01	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/29/23 16:37	08/29/23 23:01	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	mg/Kg		08/29/23 16:37	08/29/23 23:01	1
o-Xylene	<0.00201	U *+	0.00201	mg/Kg		08/29/23 16:37	08/29/23 23:01	1
Xylenes, Total	<0.00402	U *+	0.00402	mg/Kg		08/29/23 16:37	08/29/23 23:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130			08/29/23 16:37	08/29/23 23:01	1
1 1 Differenchemanne (Court)	60	01	70 120			00/00/00 16:07	00/00/00 00:01	4

Surrogate	%Recovery Qual	illier Limits	Prepared	Anaryzea	DII Fac
4-Bromofluorobenzene (Surr)	87	70 - 130	08/29/23 16:37	08/29/23 23:01	1
1,4-Difluorobenzene (Surr)	69 S1-	70 - 130	08/29/23 16:37	08/29/23 23:01	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg		_	08/30/23 09:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			08/28/23 23:37	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum Job ID: 890-5154-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: BH03

Date Received: 08/24/23 15:22

Lab Sample ID: 890-5154-3 Date Collected: 08/24/23 13:15

Matrix: Solid

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.4	U	50.4	mg/Kg		08/28/23 10:53	08/28/23 19:32	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.4	U	50.4	mg/Kg		08/28/23 10:53	08/28/23 19:32	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		08/28/23 10:53	08/28/23 19:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130			08/28/23 10:53	08/28/23 19:32	1
o-Terphenyl	93		70 - 130			08/28/23 10:53	08/28/23 19:32	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
			4.98	mg/Kg			08/30/23 00:13	

Surrogate Summary

Client: Ensolum Job ID: 890-5154-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-5154-1	BH01	102	65 S1-	
890-5154-1 MS	BH01	128	118	
890-5154-1 MSD	BH01	136 S1+	115	
390-5154-2	BH02	75	76	
390-5154-3	BH03	87	69 S1-	
_CS 880-61493/1-A	Lab Control Sample	133 S1+	121	
_CSD 880-61493/2-A	Lab Control Sample Dup	133 S1+	117	
MB 880-61445/5-A	Method Blank	78	80	
MB 880-61493/5-A	Method Blank	79	77	

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)	
880-32575-A-5-D MS	Matrix Spike	123	89	
880-32575-A-5-E MSD	Matrix Spike Duplicate	124	92	
890-5154-1	BH01	126	97	
890-5154-2	BH02	127	99	
890-5154-3	BH03	123	93	
LCS 880-61196/2-A	Lab Control Sample	111	102	
LCSD 880-61196/3-A	Lab Control Sample Dup	124	116	
MB 880-61196/1-A	Method Blank	136 S1+	111	

1CO = 1-Chlorooctane OTPH = o-Terphenyl

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Client: Ensolum Job ID: 890-5154-1 SDG: 03C1558161 Project/Site: James Ranch Unit Booster

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-61445/5-A

Lab Sample ID: MB 880-61493/5-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 61425

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 61445

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/29/23 10:54	08/29/23 11:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/29/23 10:54	08/29/23 11:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/29/23 10:54	08/29/23 11:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/29/23 10:54	08/29/23 11:23	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/29/23 10:54	08/29/23 11:23	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/29/23 10:54	08/29/23 11:23	1

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Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	78		70 - 130
1 4-Difluorobenzene (Surr)	80		70 - 130

Dil Fac Prepared Analyzed 08/29/23 10:54 08/29/23 11:23 08/29/23 10:54 08/29/23 11:23

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 61493

Analysis Batch: 61425

	мв	мв						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/29/23 16:37	08/29/23 21:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/29/23 16:37	08/29/23 21:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/29/23 16:37	08/29/23 21:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/29/23 16:37	08/29/23 21:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/29/23 16:37	08/29/23 21:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/29/23 16:37	08/29/23 21:58	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	d Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	08/29/23 16	5:37 08/29/23 21:58	1
1,4-Difluorobenzene (Surr)	77		70 - 130	08/29/23 16	6:37 08/29/23 21:58	1

Lab Sample ID: LCS 880-61493/1-A

Matrix: Solid

Analysis Batch: 61425

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

Prep Batch: 61493

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09608		mg/Kg		96	70 - 130	
Toluene	0.100	0.1145		mg/Kg		114	70 - 130	
Ethylbenzene	0.100	0.1238		mg/Kg		124	70 - 130	
m-Xylene & p-Xylene	0.200	0.2758	*+	mg/Kg		138	70 - 130	
o-Xylene	0.100	0.1378	*+	mg/Kg		138	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130
1,4-Difluorobenzene (Surr)	121		70 - 130

Lab Sample ID: LCSD 880-61493/2-A

Matrix: Solid

Analysis Batch: 61425

Client Sample ID: La	ab Control Sample Dup
	Prop Type: Total/NA

Prep Type: Total/NA

Prep Batch: 61493

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09126		mg/Kg		91	70 - 130	5	35

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QC Sample Results

Client: Ensolum Job ID: 890-5154-1
Project/Site: James Ranch Unit Booster SDG: 03C1558161

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

Lab Sample ID: LCSD 880-61493/2-A

Matrix: Solid

Analysis Batch: 61425

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 61493

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.1103		mg/Kg		110	70 - 130	4	35
Ethylbenzene	0.100	0.1161		mg/Kg		116	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.2563		mg/Kg		128	70 - 130	7	35
o-Xylene	0.100	0.1284		mg/Kg		128	70 - 130	7	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130
1,4-Difluorobenzene (Surr)	117		70 - 130

Lab Sample ID: 890-5154-1 MS

Matrix: Solid

Analysis Batch: 61425

Client Sample ID: BH01
Prep Type: Total/NA

Prep Batch: 61493

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00198	U	0.101	0.08062		mg/Kg		80	70 - 130	
Toluene	<0.00198	U	0.101	0.09676		mg/Kg		96	70 - 130	
Ethylbenzene	<0.00198	U	0.101	0.1018		mg/Kg		101	70 - 130	
m-Xylene & p-Xylene	<0.00397	U *+	0.202	0.2234		mg/Kg		111	70 - 130	
o-Xylene	<0.00198	U *+	0.101	0.1114		mg/Kg		110	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	128	70 - 130
1.4-Difluorobenzene (Surr)	118	70 - 130

Lab Sample ID: 890-5154-1 MSD

Matrix: Solid

Analysis Batch: 61425

Client Sample ID: BH01

Prep Type: Total/NA

Prep Batch: 61493

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00198	U	0.101	0.08056		mg/Kg		80	70 - 130	0	35
Toluene	<0.00198	U	0.101	0.09903		mg/Kg		98	70 - 130	2	35
Ethylbenzene	<0.00198	U	0.101	0.1059		mg/Kg		105	70 - 130	4	35
m-Xylene & p-Xylene	<0.00397	U *+	0.202	0.2320		mg/Kg		115	70 - 130	4	35
o-Xylene	<0.00198	U *+	0.101	0.1157		mg/Kg		114	70 - 130	4	35

MSD MSD

MD MD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130
1,4-Difluorobenzene (Surr)	115		70 - 130

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

Lab Sample ID: MB 880-61196/1-A

Matrix: Solid

Analysis Batch: 61237

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

Prep Batch: 61196

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		08/26/23 11:04	08/28/23 09:01	1
(CDO) C6 C40								

(GRO)-C6-C10

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Job ID: 890-5154-1 Client: Ensolum Project/Site: James Ranch Unit Booster

SDG: 03C1558161

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

Lab Sample ID: MB 880-61196/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 61237** Prep Batch: 61196

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/26/23 11:04	08/28/23 09:01	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/26/23 11:04	08/28/23 09:01	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	136	S1+	70 - 130			08/26/23 11:04	08/28/23 09:01	1
o-Terphenvl	111		70 ₋ 130			08/26/23 11:04	08/28/23 09:01	1

Lab Sample ID: LCS 880-61196/2-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 61237** Prep Batch: 61196 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 859.4 86 70 - 130 mg/Kg (GRO)-C6-C10 1000 888.7 Diesel Range Organics (Over 89 70 - 130 mg/Kg C10-C28) LCS LCS Qualifier Limits Surrogate %Recovery

1-Chlorooctane 70 - 130 111 o-Terphenyl 102 70 - 130 Lab Sample ID: LCSD 880-61196/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid**

Analysis Batch: 61237 Prep Batch: 61196 Spike LCSD LCSD %Rec RPD Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Gasoline Range Organics 1000 936.7 94 70 - 130 9 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 952.1 mg/Kg 95 70 - 130 7 20 C10-C28)

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 124 70 - 130 o-Terphenyl 116 70 - 130

Lab Sample ID: 880-32575-A-5-D MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 61237 Prep Batch: 61196

Result	Qualifier	A al al a al							
		Added	Result	Qualifier	Unit	D	%Rec	Limits	
<49.8	U	1010	998.4		mg/Kg		96	70 - 130	
<49.8	U	1010	1142		mg/Kg		111	70 - 130	
мѕ	MS								
	<49.8	<49.8 U <49.8 U <i>MS MS</i>	<49.8 U 1010	<49.8 U 1010 1142	<49.8 U 1010 1142	<49.8 U 1010 1142 mg/Kg	<49.8 U 1010 1142 mg/Kg	<49.8 U 1010 1142 mg/Kg 111	<49.8 U 1010 1142 mg/Kg 111 70 - 130

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 123 70 - 130 70 - 130 89 o-Terphenyl

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Prep Type: Total/NA

Job ID: 890-5154-1

Client: Ensolum SDG: 03C1558161 Project/Site: James Ranch Unit Booster

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

Lab Sample ID: 880-32575-A-5	lient Sa	ent Sample ID: Matrix Spike Duplicate									
Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 61237									Prep	Batch:	61196
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	1010	987.1		mg/Kg		95	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.8	U	1010	1182		mg/Kg		115	70 - 130	3	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	124		70 - 130
o-Terphenyl	92		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-61432/1-A	Client Sample ID: Method Blank
Matrix: Solid	Prep Type: Soluble
Analysis Batch: 61491	

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Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			08/29/23 22:47	1

Lab Sample ID: LCS 880-61432/2-A	Client Sample ID: Lab Control Sample
Matrix: Solid	Prep Type: Soluble
Analysis Batch: 61491	

	Spike	LCS	LCS			%Rec
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits
Chloride	250	256.9	ma/l	Ka	103	90 _ 110

Lab Sample ID: LCSD 880-61432/3-A	Client Sample ID: Lab Control Sample Dup
Matrix: Solid	Prep Type: Soluble

Analysis Batch: 61491

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	254.5		ma/Ka		102	90 110		20	

Г	
Lab Sample ID: 880-32651-A-1-C MS	Client Sample ID: Matrix Spike
Matrix: Calid	Bron Types Solvible
Matrix: Solid	Prep Type: Soluble

Analysis Batch: 61491

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	147		251	400.9		ma/Ka		101	90 110		•

Chionde	147	251	400.9	mg/kg	101 90 - 110	
Г						
Lab Sample ID: 880-32651-A-1	1-D MSD			Client	Sample ID: Matrix Spike I	Duplicate

Analysis Batch: 61491

Matrix: Solid

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	147		251	403.9		mg/Kg		102	90 - 110	1	20

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Prep Type: Soluble

QC Association Summary

Client: EnsolumJob ID: 890-5154-1Project/Site: James Ranch Unit BoosterSDG: 03C1558161

GC VOA

Analysis Batch: 61425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5154-1	BH01	Total/NA	Solid	8021B	61493
890-5154-2	BH02	Total/NA	Solid	8021B	61493
890-5154-3	BH03	Total/NA	Solid	8021B	61493
MB 880-61445/5-A	Method Blank	Total/NA	Solid	8021B	61445
MB 880-61493/5-A	Method Blank	Total/NA	Solid	8021B	61493
LCS 880-61493/1-A	Lab Control Sample	Total/NA	Solid	8021B	61493
LCSD 880-61493/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61493
890-5154-1 MS	BH01	Total/NA	Solid	8021B	61493
890-5154-1 MSD	BH01	Total/NA	Solid	8021B	61493

Prep Batch: 61445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-61445/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 61493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5154-1	BH01	Total/NA	Solid	5035	<u> </u>
890-5154-2	BH02	Total/NA	Solid	5035	
890-5154-3	BH03	Total/NA	Solid	5035	
MB 880-61493/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-61493/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-61493/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5154-1 MS	BH01	Total/NA	Solid	5035	
890-5154-1 MSD	BH01	Total/NA	Solid	5035	

Analysis Batch: 61524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5154-1	BH01	Total/NA	Solid	Total BTEX	
890-5154-2	BH02	Total/NA	Solid	Total BTEX	
890-5154-3	BH03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 61196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5154-1	BH01	Total/NA	Solid	8015NM Prep	
890-5154-2	BH02	Total/NA	Solid	8015NM Prep	
890-5154-3	BH03	Total/NA	Solid	8015NM Prep	
MB 880-61196/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-61196/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-61196/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-32575-A-5-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-32575-A-5-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 61237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5154-1	BH01	Total/NA	Solid	8015B NM	61196
890-5154-2	BH02	Total/NA	Solid	8015B NM	61196
890-5154-3	BH03	Total/NA	Solid	8015B NM	61196
MB 880-61196/1-A	Method Blank	Total/NA	Solid	8015B NM	61196
LCS 880-61196/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	61196

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QC Association Summary

Client: Ensolum Job ID: 890-5154-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

GC Semi VOA (Continued)

Analysis Batch: 61237 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-61196/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	61196
880-32575-A-5-D MS	Matrix Spike	Total/NA	Solid	8015B NM	61196
880-32575-A-5-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	61196

Analysis Batch: 61413

Lab Sample ID 890-5154-1	Client Sample ID BH01	Prep Type Total/NA	Matrix Solid	Method 8015 NM	Prep Batch
890-5154-2	BH02	Total/NA	Solid	8015 NM	
890-5154-3	BH03	Total/NA	Solid	8015 NM	

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Leach Batch: 61432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5154-1	BH01	Soluble	Solid	DI Leach	
890-5154-2	BH02	Soluble	Solid	DI Leach	
890-5154-3	BH03	Soluble	Solid	DI Leach	
MB 880-61432/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-61432/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-61432/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-32651-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-32651-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 61491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5154-1	BH01	Soluble	Solid	300.0	61432
890-5154-2	BH02	Soluble	Solid	300.0	61432
890-5154-3	BH03	Soluble	Solid	300.0	61432
MB 880-61432/1-A	Method Blank	Soluble	Solid	300.0	61432
LCS 880-61432/2-A	Lab Control Sample	Soluble	Solid	300.0	61432
LCSD 880-61432/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	61432
880-32651-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	61432
880-32651-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	61432

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Client: Ensolum Job ID: 890-5154-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

Client Sample ID: BH01 Lab Sample ID: 890-5154-1

Matrix: Solid

Date Collected: 08/24/23 11:05 Date Received: 08/24/23 15:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	61493	08/29/23 16:37	AJ	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61425	08/29/23 22:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61524	08/30/23 09:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			61413	08/28/23 23:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	61196	08/28/23 10:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61237	08/28/23 18:48	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	61432	08/29/23 09:59	SMC	EET MID
Soluble	Analysis	300.0		1			61491	08/29/23 23:46	CH	EET MID

Lab Sample ID: 890-5154-2 **Client Sample ID: BH02**

Date Collected: 08/24/23 12:03 **Matrix: Solid** Date Received: 08/24/23 15:22

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 Total/NA Prep 4.98 g 5 mL 61493 08/29/23 16:37 AJ EET MID 8021B Total/NA 5 mL **EET MID** Analysis 1 5 mL 61425 08/29/23 22:40 SM Total/NA Total BTEX 61524 08/30/23 09:53 SM Analysis 1 **EET MID** Total/NA Analysis 8015 NM 61413 08/28/23 23:37 SM **EET MID** Total/NA 8015NM Prep 9.96 g 61196 Prep 10 mL 08/28/23 10:53 TKC EET MID Total/NA Analysis 8015B NM 1 uL 1 uL 61237 08/28/23 19:10 SM **EET MID** Soluble Leach DI Leach 4.97 g 50 mL 61432 08/29/23 09:59 SMC **EET MID** Soluble Analysis 300.0 1 61491 08/30/23 00:06 СН **EET MID**

Lab Sample ID: 890-5154-3 **Client Sample ID: BH03** Date Collected: 08/24/23 13:15

Date Received: 08/24/23 15:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	61493	08/29/23 16:37	AJ	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61425	08/29/23 23:01	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61524	08/30/23 09:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			61413	08/28/23 23:37	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	61196	08/28/23 10:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61237	08/28/23 19:32	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	61432	08/29/23 09:59	SMC	EET MID
Soluble	Analysis	300.0		1			61491	08/30/23 00:13	CH	EET MID

Laboratory References:

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

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Matrix: Solid

Accreditation/Certification Summary

Client: Ensolum
Project/Site: James Ranch Unit Booster

Job ID: 890-5154-1
SDG: 03C1558161

Laboratory: Eurofins Midland

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

Authority Progra		ogram	Identification Number	Expiration Date 06-30-24	
Texas	NELAP		T104704400-23-26		
The following analytes	are included in this report, bu	it the laboratory is not certific	ed by the governing authority. This list ma	av include analytes for	
the agency does not of	fer certification.	,	, gg,	.,	
the agency does not of Analysis Method	fer certification. Prep Method	Matrix	Analyte	,	
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Method Summary

Client: Ensolum

Job ID: 890-5154-1 Project/Site: James Ranch Unit Booster SDG: 03C1558161

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

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Sample Summary

Client: Ensolum

Project/Site: James Ranch Unit Booster

Job ID: 890-5154-1

SDG: 03C1558161

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5154-1	BH01	Solid	08/24/23 11:05	08/24/23 15:22	3
890-5154-2	BH02	Solid	08/24/23 12:03	08/24/23 15:22	4
890-5154-3	BH03	Solid	08/24/23 13:15	08/24/23 15:22	1

Relinquished by: (Signature)

Circle Method(s) and Metal(s) to be analyzed

Total 200.7 / 6010

200.8 / 6020:

8RCRA 13PPM Texas 11 Al Sb As Ba

Be B Cd

TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Ci

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 su urofins 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 analyze ice. Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and su

Received by: (Signature)

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24.00 Date/Time

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Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date: 08/25/2020 Rev. 2020.2

City, State ZIP: Project Manager Company Name: eurofins arisbad NM Nahonal Parks Hwy Xenco Belli **Environment Testing** 96727 City, State ZIP: Bill to: (if different) Company Name: Jamet 40 arlsbac

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Chain of Custody

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

	www.xenco.com	Page 1 of 1	
Green	Work Order Comments	omments	
a u	Program: UST/PST PRP Brov	Brownfields ☐ RRC ☐ Superfund ☐	
reenc St	roject:		
NM 88720	Reporting: Level II Level III PST/UST	PST/UST TRRP Level IV	
bil.com	Deliverables: EDD ADaPT	Other:	
ANALYSIS REQUEST	डा	Preservative Codes	
		None: NO DI Water: H ₂ O	
		Cool: Cool MeOH: Me	
		HCL: HC HNO 3: HN	
		H ₂ SO ₄ : H ₂ NaOH: Na	
		H ₃ PO ₄ : HP	
		NaHSO 4: NABIS	
		Zn Acetate+NaOH: Zn	20
		NaOH+ASCOPDIC ACIO: SAPC	- ^
		Sample Comments	- 00
		Incident #:	.
		NAPP2319954265	-
		Cost center:	
		1_	20118 31100T
		1	-
		API: 30-015 4024	+
		30-015-40145	
		Ben Belill:	
		lobelille ensolum.	83
a Cr Co Cu Fe Pb Mg Mn Mo	Ni K Se Ag SiO ₂ Na Sr	TI Sn	
Co Cu Pb Mn Mo Ni Se Ag	Ag TI U Hg: 1631 / 245.1 / 7470	/7470 /7471	
bcontractors. It assigns standard terms and conditions ch losses are due to circumstances beyond the control	and conditions nd the control		
and These terms will be enforced unless previously negotiated	reviously negotiated.		

SAMPLE RECEIPT

erop Blank:

Yes

No

Wet Ice:

EGDWM

Parameters

the lab, if received by 4:30pm TAT starts the day received by

No

Samples Received Intact:

Sample Custody Seals: Cooler Custody Seals:

Yes No

Temperature Reading:

200

hlorides

Corrected Temperature:

Yes No (N/A

Correction Factor: hermometer ID:

Sample Identification

Matrix

Sampled

Sampled

Depth

Comp Grab/

Cont # of

TPH

BTEX

Date

Time

8 24 23

11:05

BH02 BH01

BH03

5

13:15

4

4

12:30

Sampler's Name: Project Location: Project Number:

Mariana O'Dell

32.45072, -103.92541 Due Date:

Sheps

03(1558161

X Routine

Rush

Code

Turn Around

barrett

breen & Exxon Mo

dimes Ranch Unit Book

roject Name:

Work Order No:

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-5154-1 SDG Number: 03C1558161

Login Number: 5154 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5154-1

SDG Number: 03C1558161

Login Number: 5154
List Source: Eurofins Midland
List Number: 2
List Creation: 08/28/23 09:44 AM

Creator: Rodriguez, Leticia

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

2

7

9

1 1

12

14

<6mm (1/4").



APPENDIX E

NMOCD Notifications

From: Collins, Melanie
To: ocd.enviro@state.nm.us

Cc: spills@slo.state.nm.us; DelawareSpills /SM; Ben Belill; Green, Garrett J

Subject: XTO - Sampling Notification (Week of 8/21/23 - 8/25/23)

Date: Thursday, August 17, 2023 10:58:58 AM

Attachments: <u>image001.png</u>

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of August 21, 2023.

Monday

• JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)

Tuesday

- Nash Deep East Battery / nAPP2317832586
- JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)

Wednesday

- JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)
- Nash Deep East Battery / nAPP2317832586

Thursday

- James Ranch Unit Booster / NAPP2319954265
- JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)
- Nash Deep East Battery / nAPP2317832586

Friday

- James Ranch Unit Booster / NAPP2319954265
- JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)

Thank you,

Melanie Collins



Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

From: Collins, Melanie
To: ocd.enviro@state.nm.us

Cc:spills@slo.state.nm.us; Green, Garrett J; Ben BelillSubject:XTO - Sampling Notification (Week of 8/28/23 - 9/1/23)

Date: Wednesday, August 23, 2023 5:06:30 PM

Attachments: <u>image001.png</u>

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of August 28, 2023.

Monday

- JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)
- James Ranch Unit Booster / NAPP2319954265

Tuesday

• JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)

Wednesday

• JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)

Thursday

- JRU DI 11 Ekalaka 823H / nAPP2224527297 (SLO)
- Indian Flats Bass Fed 6 / NMAP1823048577

Thank you,

Melanie Collins



Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

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

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 272033

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	272033
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation Closure approved. All areas not reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as practical. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed.	2/16/2024
amaxwell	When submitting a reclamation report, include an Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	2/16/2024