

Incident ID	nAPP2202549943
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	180 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: Each of the following items must be included in the report.

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

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

Oil Conservation Division

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

Printed Name: Amy Barnhill

Title: Waste and Water Specialist

Signature: 

Date: 5-24-22

email: ABarnhill@chevron.com

Telephone: 432-687-7108

OCD Only

Received by: _____

Date: _____

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Remediation Plan

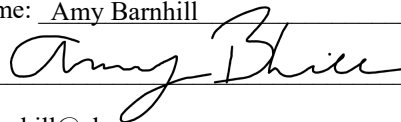
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

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

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

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Amy Barnhill Title: Waste and Water Specialist
Signature:  Date: 5-24-22
email: ABarnhill@chevron.com Telephone: 432-687-7108

OCD Only

Received by: _____ Date: _____

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

Signature:  Date: 06/01/2022

Tracking Number: nAPP2202549943
Delineation Report and Remediation Plan
Gravitas SWD
Produced Water Release
Lea County, New Mexico

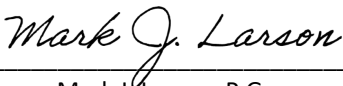
Latitude: N 32.04064265°
Longitude: W -103.65975189°

LAI Project No. 22-0105-02

May 12, 2022

Prepared for:
Chevron USA Inc.
6301 Deauville Blvd.
Midland, Texas 79706

Prepared by:
Larson & Associates, Inc.
507 North Marienfeld Street, Suite 202
Midland, Texas 79701



Mark J. Larson, P.G.
Certified Professional Geologist #10490



Robert Nelson
Sr. Geoscientist

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Tracking Number: nAPP2202549943
Delineation Report and Remediation Plan
Maelstrom SWD, Chevron USA, Inc.
Produced Water Release
May 17, 2022

1.0 INTRODUCTION

Larson & Associates, Inc. (LAI), has prepared this delineation report and remediation plan on behalf of Chevron USA Inc. (Chevron) for submittal to the New Mexico Oil Conservation Division (OCD) District I for a produced water release at the Maelstrom SWD (Site) located in Unit J (NW/4, SE/4), Section 15, Township 26 South, Range 27 East in Lea County, New Mexico. The geodetic position is North 32.04064265° and West -103.65975189°. Figure 1 present a topographic map. Figure 2 presents an aerial map.

1.1 Background

The release was discovered on January 19, 2022, due to a pinhole leak in a 4" suction expansion joint. Chevron reported 6.8 barrels (bbls) of produced water was released, with no recovery. The affected area measures approximately 320 square feet. The initial C-141 was submitted to OCD district I on January 25, 2022. The release was assigned incident number nAPP2202549943. Appendix A presents the Chevron spill calculation and spill map.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,168 feet above mean sea level (msl).
- The surface elevation gradually decreases to the southwest.
- There are no surface water features within 1,000 feet of the Site.
- Karst data provided by the USGS describes the Site as "Medium risk" potential.
- The soils are designated as Pyote soil and due land, 0 to 3 percent slopes, consisting of 0 to 30 fine sands, underlain by 30 to 60 inches of fine sandy loam.
- The geology is Quaternary age sand and silt, and locally includes cover sand.
- Groundwater was reported at approximately 180 feet below ground surface (bgs) in 2013 from a fresh water well located approximately 1.68 miles southwest of the Site in Section 21, Township 26 South, Range 32 East.

Appendix B presents USGS data depicting karst risk potential.

1.3 Remediation Standards

The following remediation standards are based on closure criteria for soils impacted by a release as presented in Table 1 of 19.15.29 NMAC:

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 2,500 mg/Kg
- Chloride 10,000 mg/Kg

Further, 19.15.29.13 NMAC (Restoration, Reclamation and Re-Vegetation) requires the operator to restore the impacted surface area that existed prior to the release or their final land use.

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Produced Water Release
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2.0 DELINEATION

On March 9, 2022, LAI personnel use a stainless-steel hand auger to collect soil samples from four (4) locations (S-1 through S-4) within the spill area and from four (4) locations in each cardinal direction of the spill (S-5 through S-8). Vertical delineation soil samples were collected to a depth of approximately 1-foot bgs at locations S-1, S-2 and S-5 through S-8 with location (S-3) collected at 0.5-feet bgs, and S-4 at 4.5-feet bgs. The soil samples were delivered under chain of custody and preservation to Eurofins-Xenco Laboratories (Xenco) in Midland, Texas, which analyzed the samples for benzene, toluene, ethylbenzene, and Xylenes (BTEX), total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C12), diesel range organics (>C12-C28) and oil range organics (>C28-C35), and chloride by EPA SW-846 Methods 8021B and 8015M, and M300, respectively.

Benzene, BTEX, and TPH were below the OCD remediation standards in Table 1 (19.15.29 NMAC) of 10 milligrams per kilogram (mg/Kg), 50 mg/Kg, and 100 mg/Kg, respectively. Chloride exceeded the NMOCD delineation limit of 600 mg/Kg in the following samples:

Sample ID	Depth (feet)	Chloride Concentration (mg/Kg)	Sample ID	Depth (feet)	Chloride Concentration (mg/Kg)
S-1	0.5	8,180	S-4	1.0	5,430
S-1	1.0	7,090	S-4	2.0	1,970
S-2	0.5	8,750	S-4	4.5	982
S-2	1.0	8,130	S-7	0.5	4,550
S-3	0.5	4,230	S-7	1.0	2,300
S-4	0.5	8,080			

On May 3, 2022, LAI personnel used the Geoprobe 7822DT direct push rig to further delineate sample locations S-1, S-2, S-3, S-4, and S-7. Soil samples were collected at one (1), three (3), five (5), and ten (10) with an additional sample taken at fifteen (15) below ground surface (bgs) from location S-3. One (1) additional horizontal delineation soil sample (S-9) was collected at a depth of approximately 1-foot bgs. The laboratory results demonstrate the release was delineated according to the NMOCD requirements (Table 1 of 19.15.29.12 NMAC). Figure 3 presents an aerial map showing the delineation soil sample locations. Appendix C presents the laboratory reports. Appendix D presents the photographic documentation.

3.0 REMEDIATION PLAN

Chevron proposes the following remedial actions:

- Excavate soil from an area measuring approximately 47 square feet encompassing sample location S-7 to a depth of approximately three (3) feet bgs.
- Excavate soil from an area measuring approximately 327 square feet encompassing sample locations S-1, S-2, and S-3 to a depth of approximately 4.1 feet bgs.
- Excavate soil from an area measuring approximately 47 square feet encompassing sample location S-4 to a depth of approximately five (5) feet bgs.

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Delineation Report and Remediation Plan
Maelstrom SWD, Chevron USA, Inc.
Produced Water Release
May 17, 2022

- Collect five (5) point composite bottom and sidewall confirmation soil samples every 200 square feet and analyze for BTEX, TPH and chloride.
- Backfill excavation with clean caliche assuming achievement of OCD remediation levels.
- Prepare report with photographs for submittal to OCD District I.

Figure 3 presents an Aerial Map Showing Proposed Excavation Area.

Tables

Table 1
Delineation Soil Sample Analytical Data Summary
Maelstrom SWD
Lea County, New Mexico
32°02'27.94"N 103°39'33.54"W

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				10	50	100 / 2,500			600 / 10,000	
S-1	0.5	3/9/2022	In-Situ	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	8,180
	1	3/9/2022	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	7,090
	1	5/3/2022	In-Situ	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	3,400
	3	5/3/2022	In-Situ	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	516
	5	5/3/2022	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	45.3
	10	5/3/2022	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	5.74
S-2	0.5	3/9/2022	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	8,750
	1	3/9/2022	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	8,130
	1	5/3/2022	In-Situ	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	6,950
	3	5/3/2022	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	1,040
	5	5/3/2022	In-Situ	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	87.8
	10	5/3/2022	In-Situ	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	10.8
S-3	0.5	3/9/2022	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	4,230
	1	5/3/2022	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	7,360
	3	5/3/2022	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	907
	5	5/3/2022	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	188
	10	5/3/2022	In-Situ	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	15.8
	15	5/3/2022	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	14.1
S-4	0.5	3/9/2022	In-Situ	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	8,080
	1	3/9/2022	In-Situ	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	5,430
	1	5/3/2022	In-Situ	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	5,080
	2	3/9/2022	In-Situ	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	1,970
	3	3/9/2022	In-Situ	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	576
	3	5/3/2022	In-Situ	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	761
	4.5	3/9/2022	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	982

Table 1
Delineation Soil Sample Analytical Data Summary
Maelstrom SWD
Lea County, New Mexico
32°02'27.94"N 103°39'33.54"W

	5	5/3/2022	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	185
	10	5/3/2022	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	35.0
S-5	0.5	3/9/2022	In-Situ	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	61.7
	1	3/9/2022	In-Situ	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	39.6
S-6	0.5	3/9/2022	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	23.8
	1	3/9/2022	In-Situ	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	7.01
S-7	0.5	3/9/2022	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	4,550
	1	3/9/2022	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	2,300
	1	5/3/2022	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	3,710
	3	5/3/2022	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	140
	5	5/3/2022	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	96.0
	10	5/3/2022	In-Situ	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	16.8
S-8	0.5	3/9/2022	In-Situ	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	115
	1	3/9/2022	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	106
S-9	0.5	5/3/2022	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	261
	1	5/3/2022	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	48.6

Notes: Analysis performed by and Xenco Laboratories in Midland, Texas by EPA SW-846 8021B (BTEX), 8015M (TPH), and 300E (Chloride)

Depth in feet below ground surface (bgs)

mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

<: denotes concentration less than analytical method reporting limit

Bold and Highlighted exceeds OCD remediation action limits

Figures

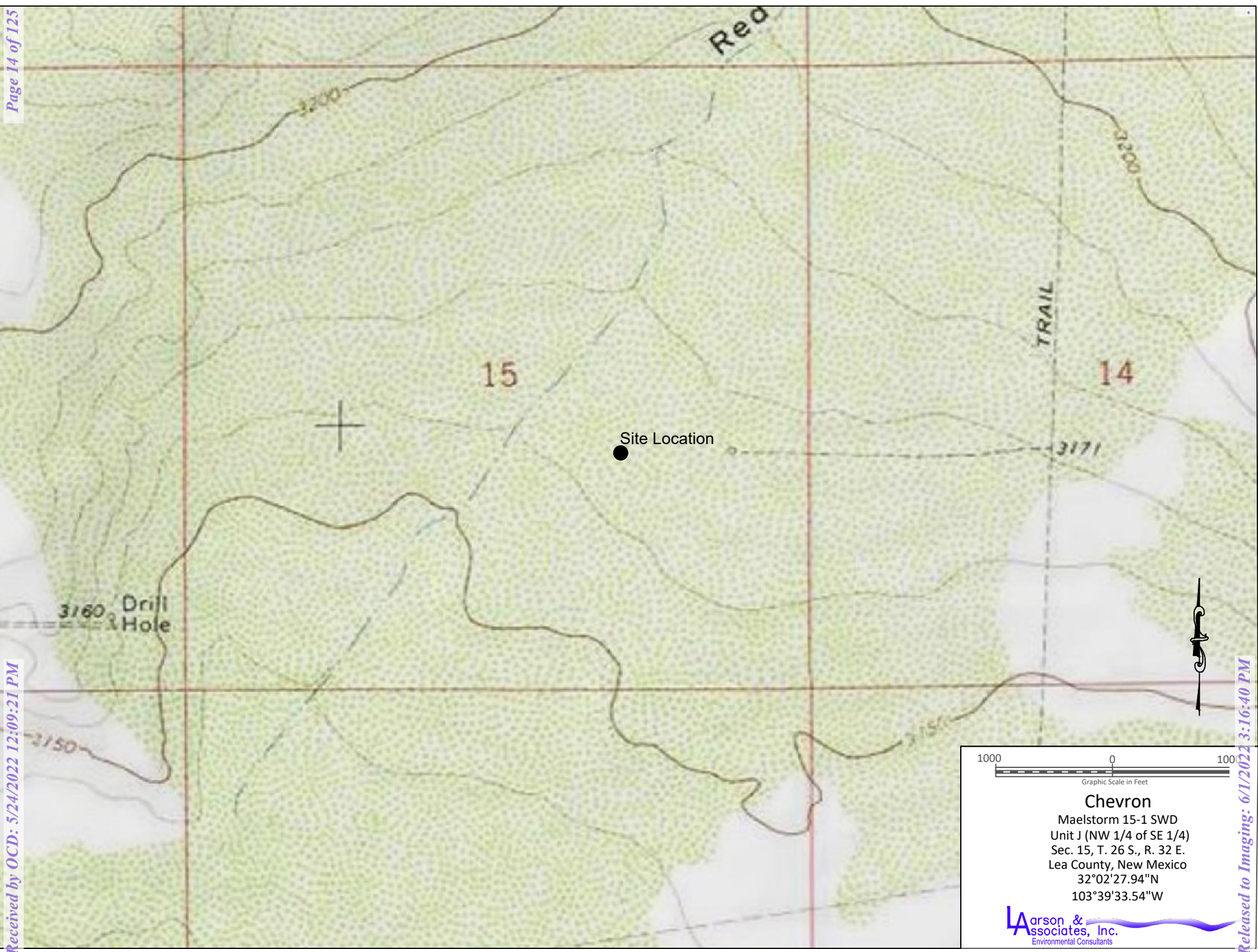


Figure 1 - Topographic Map



Legend

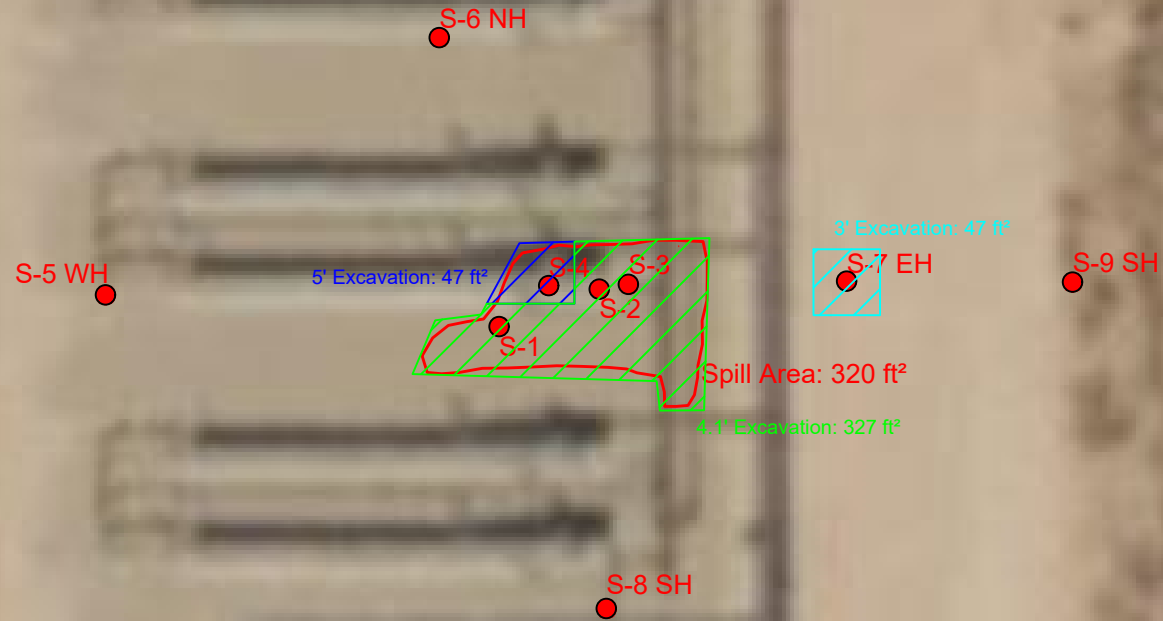
- Spill Area
- Soil Sample Location

20 0 20
Graphic Scale in Feet

Chevron
Maelstorm 15-1 SWD
Unit J (NW 1/4 of SE 1/4)
Sec. 15, T. 26 S., R. 32 E.
Lea County, New Mexico
32°02'27.94"N
103°39'33.54"W

Larson & Associates, Inc.
Environmental Consultants

Figure 2 - Aerial Map



Legend

- Spill Area
- Soil Sample Location
- Proposed Excavation: 3'
- Proposed Excavation: 4.1'
- Proposed Excavation: 5'

20 0 20
Graphic Scale in Feet

Chevron
Maelstorm 15-1 SWD
Unit J (NW 1/4 of SE 1/4)
Sec. 15, T. 26 S., R. 32 E.
Lea County, New Mexico
32°02'27.94"N
103°39'33.54"W

Larson & Associates, Inc.
Environmental Consultants

Figure 3 - Aerial Map Showing Proposed Excavation Areas

Appendix A

Chevron Spill Calculation

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	nAPP2202549943
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Release Notification

Responsible Party

Responsible Party: Chevron USA	OGRID: 4323
Contact Name: Amy Barnhill	Contact Telephone: 432-687-7108
Contact email: ABarnhill@chevron.com	Incident # (assigned by OCD)
Contact mailing address: 6301 Deauville Blvd Midland, Tx 79706	

Location of Release Source

Latitude 32.04064265 _____ Longitude -103.65975189 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Salado Draw Maelstrom SWD	Site Type: Produced Water
Date Release Discovered: 1-19-2022	API# (if applicable)

Unit Letter	Section	Township	Range	County
J	15	26S	32E	Lea

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls): 6.8	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

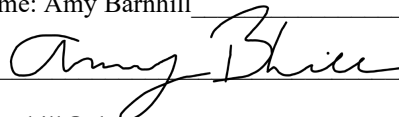
Cause of Release: Pinhole in 4" Suction Expansion Joint

Incident ID	nAPP2202549943
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? 	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: Amy Barnhill	Title: Water Specialist
Signature: 	Date: 1-25-22
email: ABarnhill@chevron.com	Telephone: 432-687-7108
<u>OCD Only</u> Received by: _____ Date: _____	

Incident ID	nAPP2202549943
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Application ID	

Spill Calculations:

Area 1

Shape: Rectangle

Secondary Containment?: No

Standing Liquid Dimensions: 30 ft x 21 ft x .375 in

Standing Liquid Volume: 4.032 bbl

Water Cut: 100%

Oil Volume:.000 bbl

Penetration Depth: .3750 in

Water to Soil Volume: .526 bbl

Water Volume: 4.558 bbl

Area 2

Shape: Rectangle

Secondary Containment?: No

Standing Liquid Dimensions: 42 ft x 6 ft x .500 in

Standing Liquid Volume: 2.081 bbl

Water Cut: 100%

Oil Volume: .000 bbl

Penetration Depth: .375 in

Water to Soil Volume: .210 bbl

Water Volume: 2.291 bbl

Appendix B
Karst Risk Potential



Maelstrom SWD

Medium

Appendix C
Laboratory Reports



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-12310-1
Laboratory Sample Delivery Group: 22-0105-02
Client Project/Site: Maelstrom SWD

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

A handwritten signature in cursive script that reads "Holly Taylor".

Authorized for release by:
3/28/2022 10:16:07 AM

Holly Taylor, Project Manager
(806)794-1296
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Laboratory Job ID: 880-12310-1
SDG: 22-0105-02

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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

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

Glossary

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

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Job ID: 880-12310-1

Laboratory: Eurofins Midland

Narrative

Job Narrative 880-12310-1

Comments

No additional comments.

Receipt

The samples were received on 3/10/2022 3:05 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 was 0.1° C.

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-21729 and analytical batch 880-21936 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA

Method 8015B NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-21475 and analytical batch 880-21458 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015B NM: Surrogate recovery for the following samples were outside control limits: S-4,4.5' (880-12310-18). 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.

General Chemistry

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-21601 and analytical batch 880-22135 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.

Organic Prep

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

VOA Prep

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-1,0.5

Lab Sample ID: 880-12310-1

Date Collected: 03/09/22 12:00

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F1	0.00200	mg/Kg		03/18/22 12:55	03/19/22 23:50	1
Toluene	<0.00200	U F1	0.00200	mg/Kg		03/18/22 12:55	03/19/22 23:50	1
Ethylbenzene	<0.00200	U F1	0.00200	mg/Kg		03/18/22 12:55	03/19/22 23:50	1
m,p-Xylenes	<0.00399	U F1	0.00399	mg/Kg		03/18/22 12:55	03/19/22 23:50	1
o-Xylene	<0.00200	U F1	0.00200	mg/Kg		03/18/22 12:55	03/19/22 23:50	1
Xylenes, Total	<0.00399	U F1	0.00399	mg/Kg		03/18/22 12:55	03/19/22 23:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	03/18/22 12:55	03/19/22 23:50	1
1,4-Difluorobenzene (Surr)	110		70 - 130	03/18/22 12:55	03/19/22 23:50	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1	49.8	mg/Kg		03/14/22 08:43	03/14/22 21:56	1
Diesel Range Organics (Over C10-C28)	<49.8	U F1	49.8	mg/Kg		03/14/22 08:43	03/14/22 21:56	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		03/14/22 08:43	03/14/22 21:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	108		70 - 130	03/14/22 08:43	03/14/22 21:56	1
o-Terphenyl (Surr)	111		70 - 130	03/14/22 08:43	03/14/22 21:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8180		49.5	mg/Kg			03/24/22 21:27	10

Client Sample ID: S-1, 1

Lab Sample ID: 880-12310-2

Date Collected: 03/09/22 12:05

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/16/22 12:55	03/20/22 00:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/16/22 12:55	03/20/22 00:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/16/22 12:55	03/20/22 00:11	1
m,p-Xylenes	<0.00401	U	0.00401	mg/Kg		03/16/22 12:55	03/20/22 00:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/16/22 12:55	03/20/22 00:11	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		03/16/22 12:55	03/20/22 00:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	03/16/22 12:55	03/20/22 00:11	1
1,4-Difluorobenzene (Surr)	109		70 - 130	03/16/22 12:55	03/20/22 00:11	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-1, 1

Lab Sample ID: 880-12310-2

Date Collected: 03/09/22 12:05

Matrix: Solid

Date Received: 03/10/22 15:05

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/14/22 23:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/14/22 23:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/14/22 23:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	115		70 - 130			03/14/22 08:43	03/14/22 23:00	1
o-Terphenyl (Surr)	115		70 - 130			03/14/22 08:43	03/14/22 23:00	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7090		49.8	mg/Kg			03/24/22 21:54	10

Client Sample ID: S-2,0.5

Lab Sample ID: 880-12310-3

Date Collected: 03/09/22 12:15

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 00:31	1
Toluene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 00:31	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 00:31	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		03/18/22 12:55	03/20/22 00:31	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 00:31	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		03/18/22 12:55	03/20/22 00:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			03/18/22 12:55	03/20/22 00:31	1
1,4-Difluorobenzene (Surr)	108		70 - 130			03/18/22 12:55	03/20/22 00:31	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/14/22 23:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/14/22 23:22	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-2,0.5

Lab Sample ID: 880-12310-3

Date Collected: 03/09/22 12:15

Matrix: Solid

Date Received: 03/10/22 15:05

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/14/22 23:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	104		70 - 130			03/14/22 08:43	03/14/22 23:22	1
o-Terphenyl (Surr)	107		70 - 130			03/14/22 08:43	03/14/22 23:22	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8750		50.0	mg/Kg			03/24/22 22:03	10

Client Sample ID: S-2,1

Lab Sample ID: 880-12310-4

Date Collected: 03/09/22 12:20

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 00:51	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 00:51	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 00:51	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		03/18/22 12:55	03/20/22 00:51	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 00:51	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/18/22 12:55	03/20/22 00:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			03/18/22 12:55	03/20/22 00:51	1
1,4-Difluorobenzene (Surr)	107		70 - 130			03/18/22 12:55	03/20/22 00:51	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/14/22 23:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/14/22 23:44	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/14/22 23:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	115		70 - 130			03/14/22 08:43	03/14/22 23:44	1
o-Terphenyl (Surr)	118		70 - 130			03/14/22 08:43	03/14/22 23:44	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8130		49.9	mg/Kg			03/24/22 22:12	10

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-3,0.5

Lab Sample ID: 880-12310-5

Date Collected: 03/09/22 12:30

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 01:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 01:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 01:12	1
m,p-Xylenes	<0.00401	U	0.00401	mg/Kg		03/18/22 12:55	03/20/22 01:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 01:12	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		03/18/22 12:55	03/20/22 01:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	03/18/22 12:55	03/20/22 01:12	1
1,4-Difluorobenzene (Surr)	109		70 - 130	03/18/22 12:55	03/20/22 01:12	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 00:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 00:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 00:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	114		70 - 130	03/14/22 08:43	03/15/22 00:03	1
o-Terphenyl (Surr)	122		70 - 130	03/14/22 08:43	03/15/22 00:03	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4230		25.0	mg/Kg			03/24/22 22:20	5

Client Sample ID: S-4,0.5

Lab Sample ID: 880-12310-6

Date Collected: 03/09/22 12:35

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 01:32	1
Toluene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 01:32	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 01:32	1
m,p-Xylenes	<0.00403	U	0.00403	mg/Kg		03/18/22 12:55	03/20/22 01:32	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 01:32	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		03/18/22 12:55	03/20/22 01:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	03/18/22 12:55	03/20/22 01:32	1
1,4-Difluorobenzene (Surr)	108		70 - 130	03/18/22 12:55	03/20/22 01:32	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-4,0.5

Lab Sample ID: 880-12310-6

Date Collected: 03/09/22 12:35

Matrix: Solid

Date Received: 03/10/22 15:05

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 00:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 00:23	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 00:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	105		70 - 130			03/14/22 08:43	03/15/22 00:23	1
o-Terphenyl (Surr)	111		70 - 130			03/14/22 08:43	03/15/22 00:23	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8080		49.8	mg/Kg			03/24/22 22:29	10

Client Sample ID: S-4,1

Lab Sample ID: 880-12310-7

Date Collected: 03/09/22 12:36

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 01:53	1
Toluene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 01:53	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 01:53	1
m,p-Xylenes	<0.00404	U	0.00404	mg/Kg		03/18/22 12:55	03/20/22 01:53	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 01:53	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		03/18/22 12:55	03/20/22 01:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130			03/18/22 12:55	03/20/22 01:53	1
1,4-Difluorobenzene (Surr)	107		70 - 130			03/18/22 12:55	03/20/22 01:53	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 00:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 00:43	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-4,1

Lab Sample ID: 880-12310-7

Date Collected: 03/09/22 12:36

Matrix: Solid

Date Received: 03/10/22 15:05

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 00:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	114		70 - 130			03/14/22 08:43	03/15/22 00:43	1
o-Terphenyl (Surr)	119		70 - 130			03/14/22 08:43	03/15/22 00:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5430	F1	50.4	mg/Kg			03/24/22 22:38	10

Client Sample ID: S-5,0.5

Lab Sample ID: 880-12310-8

Date Collected: 03/09/22 12:50

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 02:13	1
Toluene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 02:13	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 02:13	1
m,p-Xylenes	<0.00404	U	0.00404	mg/Kg		03/18/22 12:55	03/20/22 02:13	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 02:13	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		03/18/22 12:55	03/20/22 02:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			03/18/22 12:55	03/20/22 02:13	1
1,4-Difluorobenzene (Surr)	107		70 - 130			03/18/22 12:55	03/20/22 02:13	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		03/14/22 08:43	03/15/22 01:04	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		03/14/22 08:43	03/15/22 01:04	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		03/14/22 08:43	03/15/22 01:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	112		70 - 130			03/14/22 08:43	03/15/22 01:04	1
o-Terphenyl (Surr)	114		70 - 130			03/14/22 08:43	03/15/22 01:04	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	61.7		4.97	mg/Kg			03/24/22 23:05	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-5,1

Lab Sample ID: 880-12310-9

Date Collected: 03/09/22 12:51

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 02:34	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 02:34	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 02:34	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		03/18/22 12:55	03/20/22 02:34	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 02:34	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/18/22 12:55	03/20/22 02:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	03/18/22 12:55	03/20/22 02:34	1
1,4-Difluorobenzene (Surr)	107		70 - 130	03/18/22 12:55	03/20/22 02:34	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 01:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 01:24	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 01:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	110		70 - 130	03/14/22 08:43	03/15/22 01:24	1
o-Terphenyl (Surr)	114		70 - 130	03/14/22 08:43	03/15/22 01:24	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	39.6		4.98	mg/Kg			03/24/22 23:13	1

Client Sample ID: S-6,0.5

Lab Sample ID: 880-12310-10

Date Collected: 03/09/22 13:00

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 02:54	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 02:54	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 02:54	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		03/18/22 12:55	03/20/22 02:54	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 02:54	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		03/18/22 12:55	03/20/22 02:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	03/18/22 12:55	03/20/22 02:54	1
1,4-Difluorobenzene (Surr)	107		70 - 130	03/18/22 12:55	03/20/22 02:54	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-6,0.5

Lab Sample ID: 880-12310-10

Date Collected: 03/09/22 13:00

Matrix: Solid

Date Received: 03/10/22 15:05

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 01:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 01:44	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 01:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	111		70 - 130			03/14/22 08:43	03/15/22 01:44	1
o-Terphenyl (Surr)	117		70 - 130			03/14/22 08:43	03/15/22 01:44	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23.8		4.97	mg/Kg			03/24/22 23:40	1

Client Sample ID: S-6,1

Lab Sample ID: 880-12310-11

Date Collected: 03/09/22 13:05

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 04:17	1
Toluene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 04:17	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 04:17	1
m,p-Xylenes	<0.00403	U	0.00403	mg/Kg		03/18/22 12:55	03/20/22 04:17	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		03/18/22 12:55	03/20/22 04:17	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		03/18/22 12:55	03/20/22 04:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			03/18/22 12:55	03/20/22 04:17	1
1,4-Difluorobenzene (Surr)	109		70 - 130			03/18/22 12:55	03/20/22 04:17	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 02:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 02:24	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-6,1

Lab Sample ID: 880-12310-11

Date Collected: 03/09/22 13:05

Matrix: Solid

Date Received: 03/10/22 15:05

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 02:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	116		70 - 130			03/14/22 08:43	03/15/22 02:24	1
o-Terphenyl (Surr)	118		70 - 130			03/14/22 08:43	03/15/22 02:24	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.01		5.05	mg/Kg			03/24/22 23:49	1

Client Sample ID: S-7,0.5

Lab Sample ID: 880-12310-12

Date Collected: 03/09/22 13:20

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 04:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 04:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 04:37	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		03/18/22 12:55	03/20/22 04:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 04:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/18/22 12:55	03/20/22 04:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			03/18/22 12:55	03/20/22 04:37	1
1,4-Difluorobenzene (Surr)	107		70 - 130			03/18/22 12:55	03/20/22 04:37	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 02:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 02:45	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 02:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	109		70 - 130			03/14/22 08:43	03/15/22 02:45	1
o-Terphenyl (Surr)	112		70 - 130			03/14/22 08:43	03/15/22 02:45	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4550		50.2	mg/Kg			03/24/22 23:58	10

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-7,1

Lab Sample ID: 880-12310-13

Date Collected: 03/09/22 13:25

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 04:58	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 04:58	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 04:58	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		03/18/22 12:55	03/20/22 04:58	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		03/18/22 12:55	03/20/22 04:58	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/18/22 12:55	03/20/22 04:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	03/18/22 12:55	03/20/22 04:58	1
1,4-Difluorobenzene (Surr)	101		70 - 130	03/18/22 12:55	03/20/22 04:58	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 03:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 03:04	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 03:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	106		70 - 130	03/14/22 08:43	03/15/22 03:04	1
o-Terphenyl (Surr)	112		70 - 130	03/14/22 08:43	03/15/22 03:04	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2300	F1	25.0	mg/Kg			03/25/22 08:59	5

Client Sample ID: S-8,0.5

Lab Sample ID: 880-12310-14

Date Collected: 03/09/22 13:40

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		03/18/22 12:55	03/20/22 05:18	1
Toluene	<0.00198	U	0.00198	mg/Kg		03/18/22 12:55	03/20/22 05:18	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		03/18/22 12:55	03/20/22 05:18	1
m,p-Xylenes	<0.00396	U	0.00396	mg/Kg		03/18/22 12:55	03/20/22 05:18	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		03/18/22 12:55	03/20/22 05:18	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		03/18/22 12:55	03/20/22 05:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	03/18/22 12:55	03/20/22 05:18	1
1,4-Difluorobenzene (Surr)	108		70 - 130	03/18/22 12:55	03/20/22 05:18	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-8,0.5

Lab Sample ID: 880-12310-14

Date Collected: 03/09/22 13:40

Matrix: Solid

Date Received: 03/10/22 15:05

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 03:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 03:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 03:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	112		70 - 130			03/14/22 08:43	03/15/22 03:24	1
o-Terphenyl (Surr)	116		70 - 130			03/14/22 08:43	03/15/22 03:24	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	115		5.01	mg/Kg			03/25/22 09:25	1

Client Sample ID: S-8,1

Lab Sample ID: 880-12310-15

Date Collected: 03/09/22 13:45

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 05:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 05:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 05:38	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		03/18/22 12:55	03/20/22 05:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 05:38	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		03/18/22 12:55	03/20/22 05:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			03/18/22 12:55	03/20/22 05:38	1
1,4-Difluorobenzene (Surr)	108		70 - 130			03/18/22 12:55	03/20/22 05:38	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 03:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 03:44	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-8,1

Lab Sample ID: 880-12310-15

Date Collected: 03/09/22 13:45

Matrix: Solid

Date Received: 03/10/22 15:05

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 03:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	111		70 - 130			03/14/22 08:43	03/15/22 03:44	1
o-Terphenyl (Surr)	111		70 - 130			03/14/22 08:43	03/15/22 03:44	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	106		4.99	mg/Kg			03/25/22 09:34	1

Client Sample ID: S-4,2'

Lab Sample ID: 880-12310-16

Date Collected: 03/09/22 12:37

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 05:59	1
Toluene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 05:59	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 05:59	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		03/18/22 12:55	03/20/22 05:59	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 05:59	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		03/18/22 12:55	03/20/22 05:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			03/18/22 12:55	03/20/22 05:59	1
1,4-Difluorobenzene (Surr)	107		70 - 130			03/18/22 12:55	03/20/22 05:59	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 04:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 04:05	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/15/22 04:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	110		70 - 130			03/14/22 08:43	03/15/22 04:05	1
o-Terphenyl (Surr)	110		70 - 130			03/14/22 08:43	03/15/22 04:05	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1970		24.9	mg/Kg			03/25/22 09:43	5

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-4,3'

Lab Sample ID: 880-12310-17

Date Collected: 03/09/22 12:38

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 06:19	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 06:19	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 06:19	1
m,p-Xylenes	<0.00401	U	0.00401	mg/Kg		03/18/22 12:55	03/20/22 06:19	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/20/22 06:19	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		03/18/22 12:55	03/20/22 06:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	03/18/22 12:55	03/20/22 06:19	1
1,4-Difluorobenzene (Surr)	108		70 - 130	03/18/22 12:55	03/20/22 06:19	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		03/14/22 08:43	03/15/22 04:24	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		03/14/22 08:43	03/15/22 04:24	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		03/14/22 08:43	03/15/22 04:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	113		70 - 130	03/14/22 08:43	03/15/22 04:24	1
o-Terphenyl (Surr)	118		70 - 130	03/14/22 08:43	03/15/22 04:24	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	576		4.95	mg/Kg			03/25/22 09:52	1

Client Sample ID: S-4,4.5'

Lab Sample ID: 880-12310-18

Date Collected: 03/09/22 12:39

Matrix: Solid

Date Received: 03/10/22 15:05

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 06:40	1
Toluene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 06:40	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 06:40	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		03/18/22 12:55	03/20/22 06:40	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		03/18/22 12:55	03/20/22 06:40	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		03/18/22 12:55	03/20/22 06:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	03/18/22 12:55	03/20/22 06:40	1
1,4-Difluorobenzene (Surr)	108		70 - 130	03/18/22 12:55	03/20/22 06:40	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-4,4.5'

Lab Sample ID: 880-12310-18

Date Collected: 03/09/22 12:39

Matrix: Solid

Date Received: 03/10/22 15:05

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			03/21/22 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/15/22 10:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 04:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 04:44	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/14/22 08:43	03/15/22 04:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	128		70 - 130			03/14/22 08:43	03/15/22 04:44	1
o-Terphenyl (Surr)	132	S1+	70 - 130			03/14/22 08:43	03/15/22 04:44	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	982		4.98	mg/Kg			03/25/22 15:11	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-12310-1	S-1,0.5	106	110
880-12310-1 MS	S-1,0.5	104	113
880-12310-1 MSD	S-1,0.5	104	112
880-12310-2	S-1, 1	104	109
880-12310-3	S-2,0.5	108	108
880-12310-4	S-2,1	104	107
880-12310-5	S-3,0.5	108	109
880-12310-6	S-4,0.5	106	108
880-12310-7	S-4,1	105	107
880-12310-8	S-5,0.5	107	107
880-12310-9	S-5,1	103	107
880-12310-10	S-6,0.5	104	107
880-12310-11	S-6,1	106	109
880-12310-12	S-7,0.5	103	107
880-12310-13	S-7,1	103	101
880-12310-14	S-8,0.5	107	108
880-12310-15	S-8,1	106	108
880-12310-16	S-4,2'	103	107
880-12310-17	S-4,3'	105	108
880-12310-18	S-4,4.5'	106	108
LCS 880-21729/1-A	Lab Control Sample	102	112
LCSD 880-21729/2-A	Lab Control Sample Dup	102	113
MB 880-21729/5-A	Method Blank	101	105
MB 880-21935/5-A	Method Blank	104	105
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-12310-1	S-1,0.5	108	111
880-12310-1 MS	S-1,0.5	121	102
880-12310-1 MSD	S-1,0.5	127	105
880-12310-2	S-1, 1	115	115
880-12310-3	S-2,0.5	104	107
880-12310-4	S-2,1	115	118
880-12310-5	S-3,0.5	114	122
880-12310-6	S-4,0.5	105	111
880-12310-7	S-4,1	114	119
880-12310-8	S-5,0.5	112	114
880-12310-9	S-5,1	110	114
880-12310-10	S-6,0.5	111	117
880-12310-11	S-6,1	116	118
880-12310-12	S-7,0.5	109	112
880-12310-13	S-7,1	106	112

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Surrogate Summary

Client: Larson & Associates, Inc.

Job ID: 880-12310-1

Project/Site: Maelstrom SWD

SDG: 22-0105-02

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)**Matrix: Solid****Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-12310-14	S-8,0.5	112	116
880-12310-15	S-8,1	111	111
880-12310-16	S-4,2'	110	110
880-12310-17	S-4,3'	113	118
880-12310-18	S-4,4.5'	128	132 S1+
LCS 880-21475/2-A	Lab Control Sample	91	83
LCSD 880-21475/3-A	Lab Control Sample Dup	101	93
MB 880-21475/1-A	Method Blank	118	129

Surrogate Legend

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-21729/5-A

Matrix: Solid

Analysis Batch: 21936

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21729

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/19/22 23:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/19/22 23:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/19/22 23:28	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		03/18/22 12:55	03/19/22 23:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/18/22 12:55	03/19/22 23:28	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/18/22 12:55	03/19/22 23:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	03/18/22 12:55	03/19/22 23:28	1
1,4-Difluorobenzene (Surr)	105		70 - 130	03/18/22 12:55	03/19/22 23:28	1

Lab Sample ID: LCS 880-21729/1-A

Matrix: Solid

Analysis Batch: 21936

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21729

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09707		mg/Kg		97	70 - 130
Toluene	0.100	0.09505		mg/Kg		95	70 - 130
Ethylbenzene	0.100	0.09420		mg/Kg		94	70 - 130
m,p-Xylenes	0.200	0.1941		mg/Kg		97	70 - 130
o-Xylene	0.100	0.09636		mg/Kg		96	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	112		70 - 130

Lab Sample ID: LCSD 880-21729/2-A

Matrix: Solid

Analysis Batch: 21936

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21729

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.1090		mg/Kg		109	70 - 130	12	35
Toluene	0.100	0.1045		mg/Kg		105	70 - 130	9	35
Ethylbenzene	0.100	0.1045		mg/Kg		104	70 - 130	10	35
m,p-Xylenes	0.200	0.2152		mg/Kg		108	70 - 130	10	35
o-Xylene	0.100	0.1067		mg/Kg		107	70 - 130	10	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: 880-12310-1 MS

Matrix: Solid

Analysis Batch: 21936

Client Sample ID: S-1,0.5

Prep Type: Total/NA

Prep Batch: 21729

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U F1	0.101	0.06711	F1	mg/Kg		67	70 - 130
Toluene	<0.00200	U F1	0.101	0.04961	F1	mg/Kg		49	70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

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

Lab Sample ID: 880-12310-1 MS

Matrix: Solid

Analysis Batch: 21936

Client Sample ID: S-1,0.5

Prep Type: Total/NA

Prep Batch: 21729

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U F1	0.101	0.03878	F1	mg/Kg		39	70 - 130
m,p-Xylenes	<0.00399	U F1	0.201	0.08423	F1	mg/Kg		42	70 - 130
o-Xylene	<0.00200	U F1	0.101	0.04567	F1	mg/Kg		45	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: 880-12310-1 MSD

Matrix: Solid

Analysis Batch: 21936

Client Sample ID: S-1,0.5

Prep Type: Total/NA

Prep Batch: 21729

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	<0.00200	U F1	0.101	0.06241	F1	mg/Kg		62	70 - 130	7	35
Toluene	<0.00200	U F1	0.101	0.04591	F1	mg/Kg		45	70 - 130	8	35
Ethylbenzene	<0.00200	U F1	0.101	0.03597	F1	mg/Kg		36	70 - 130	8	35
m,p-Xylenes	<0.00399	U F1	0.202	0.07813	F1	mg/Kg		39	70 - 130	8	35
o-Xylene	<0.00200	U F1	0.101	0.04198	F1	mg/Kg		42	70 - 130	8	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	112		70 - 130

Lab Sample ID: MB 880-21935/5-A

Matrix: Solid

Analysis Batch: 21936

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21935

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/19/22 09:25	03/19/22 12:36	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/19/22 09:25	03/19/22 12:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/19/22 09:25	03/19/22 12:36	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		03/19/22 09:25	03/19/22 12:36	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/19/22 09:25	03/19/22 12:36	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/19/22 09:25	03/19/22 12:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	03/19/22 09:25	03/19/22 12:36	1
1,4-Difluorobenzene (Surr)	105		70 - 130	03/19/22 09:25	03/19/22 12:36	1

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

Lab Sample ID: MB 880-21475/1-A

Matrix: Solid

Analysis Batch: 21458

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21475

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/14/22 20:54	1

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

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

Lab Sample ID: MB 880-21475/1-A

Matrix: Solid

Analysis Batch: 21458

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21475

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/14/22 20:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/14/22 08:43	03/14/22 20:54	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	118		70 - 130			03/14/22 08:43	03/14/22 20:54	1
o-Terphenyl (Surr)	129		70 - 130			03/14/22 08:43	03/14/22 20:54	1

Lab Sample ID: LCS 880-21475/2-A

Matrix: Solid

Analysis Batch: 21458

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21475

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1106		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)	1000	842.0		mg/Kg		84	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane (Surr)	91		70 - 130				
o-Terphenyl (Surr)	83		70 - 130				

Lab Sample ID: LCSD 880-21475/3-A

Matrix: Solid

Analysis Batch: 21458

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21475

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1159		mg/Kg		116	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	932.7		mg/Kg		93	70 - 130	10	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane (Surr)	101		70 - 130						
o-Terphenyl (Surr)	93		70 - 130						

Lab Sample ID: 880-12310-1 MS

Matrix: Solid

Analysis Batch: 21458

Client Sample ID: S-1,0.5

Prep Type: Total/NA

Prep Batch: 21475

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1	998	1308		mg/Kg		129	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U F1	998	1335		mg/Kg		129	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane (Surr)	121		70 - 130						
o-Terphenyl (Surr)	102		70 - 130						

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

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

Lab Sample ID: 880-12310-1 MSD

Matrix: Solid

Analysis Batch: 21458

Client Sample ID: S-1,0.5

Prep Type: Total/NA

Prep Batch: 21475

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1	998	1414	F1	mg/Kg		139	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<49.8	U F1	998	1390	F1	mg/Kg		134	70 - 130	4	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane (Surr)	127		70 - 130								
o-Terphenyl (Surr)	105		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-21600/1-A

Matrix: Solid

Analysis Batch: 22122

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			03/24/22 20:07	1

Lab Sample ID: LCS 880-21600/2-A

Matrix: Solid

Analysis Batch: 22122

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	271.9		mg/Kg		109	90 - 110

Lab Sample ID: LCSD 880-21600/3-A

Matrix: Solid

Analysis Batch: 22122

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	271.2		mg/Kg		108	90 - 110	0	20

Lab Sample ID: 880-12310-7 MS

Matrix: Solid

Analysis Batch: 22122

Client Sample ID: S-4,1

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5430	F1	2520	8433	F1	mg/Kg		119	90 - 110

Lab Sample ID: 880-12310-7 MSD

Matrix: Solid

Analysis Batch: 22122

Client Sample ID: S-4,1

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5430	F1	2520	8380	F1	mg/Kg		117	90 - 110	1	20

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-21601/1-A

Matrix: Solid

Analysis Batch: 22135

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			03/25/22 08:32	1

Lab Sample ID: LCS 880-21601/2-A

Matrix: Solid

Analysis Batch: 22135

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	271.1		mg/Kg		108	90 - 110

Lab Sample ID: LCSD 880-21601/3-A

Matrix: Solid

Analysis Batch: 22135

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	270.6		mg/Kg		108	90 - 110	0	20

Lab Sample ID: 880-12310-13 MS

Matrix: Solid

Analysis Batch: 22135

Client Sample ID: S-7,1

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2300	F1	1250	3777	F1	mg/Kg		118	90 - 110

Lab Sample ID: 880-12310-13 MSD

Matrix: Solid

Analysis Batch: 22135

Client Sample ID: S-7,1

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2300	F1	1250	3744	F1	mg/Kg		116	90 - 110	1	20

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

GC VOA

Prep Batch: 21729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12310-1	S-1,0.5	Total/NA	Solid	5035	
880-12310-2	S-1, 1	Total/NA	Solid	5035	
880-12310-3	S-2,0.5	Total/NA	Solid	5035	
880-12310-4	S-2,1	Total/NA	Solid	5035	
880-12310-5	S-3,0.5	Total/NA	Solid	5035	
880-12310-6	S-4,0.5	Total/NA	Solid	5035	
880-12310-7	S-4,1	Total/NA	Solid	5035	
880-12310-8	S-5,0.5	Total/NA	Solid	5035	
880-12310-9	S-5,1	Total/NA	Solid	5035	
880-12310-10	S-6,0.5	Total/NA	Solid	5035	
880-12310-11	S-6,1	Total/NA	Solid	5035	
880-12310-12	S-7,0.5	Total/NA	Solid	5035	
880-12310-13	S-7,1	Total/NA	Solid	5035	
880-12310-14	S-8,0.5	Total/NA	Solid	5035	
880-12310-15	S-8,1	Total/NA	Solid	5035	
880-12310-16	S-4,2'	Total/NA	Solid	5035	
880-12310-17	S-4,3'	Total/NA	Solid	5035	
880-12310-18	S-4,4.5'	Total/NA	Solid	5035	
MB 880-21729/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-21729/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-21729/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-12310-1 MS	S-1,0.5	Total/NA	Solid	5035	
880-12310-1 MSD	S-1,0.5	Total/NA	Solid	5035	

Prep Batch: 21935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-21935/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 21936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12310-1	S-1,0.5	Total/NA	Solid	8021B	21729
880-12310-2	S-1, 1	Total/NA	Solid	8021B	21729
880-12310-3	S-2,0.5	Total/NA	Solid	8021B	21729
880-12310-4	S-2,1	Total/NA	Solid	8021B	21729
880-12310-5	S-3,0.5	Total/NA	Solid	8021B	21729
880-12310-6	S-4,0.5	Total/NA	Solid	8021B	21729
880-12310-7	S-4,1	Total/NA	Solid	8021B	21729
880-12310-8	S-5,0.5	Total/NA	Solid	8021B	21729
880-12310-9	S-5,1	Total/NA	Solid	8021B	21729
880-12310-10	S-6,0.5	Total/NA	Solid	8021B	21729
880-12310-11	S-6,1	Total/NA	Solid	8021B	21729
880-12310-12	S-7,0.5	Total/NA	Solid	8021B	21729
880-12310-13	S-7,1	Total/NA	Solid	8021B	21729
880-12310-14	S-8,0.5	Total/NA	Solid	8021B	21729
880-12310-15	S-8,1	Total/NA	Solid	8021B	21729
880-12310-16	S-4,2'	Total/NA	Solid	8021B	21729
880-12310-17	S-4,3'	Total/NA	Solid	8021B	21729
880-12310-18	S-4,4.5'	Total/NA	Solid	8021B	21729
MB 880-21729/5-A	Method Blank	Total/NA	Solid	8021B	21729
MB 880-21935/5-A	Method Blank	Total/NA	Solid	8021B	21935
LCS 880-21729/1-A	Lab Control Sample	Total/NA	Solid	8021B	21729

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

GC VOA (Continued)

Analysis Batch: 21936 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-21729/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	21729
880-12310-1 MS	S-1,0.5	Total/NA	Solid	8021B	21729
880-12310-1 MSD	S-1,0.5	Total/NA	Solid	8021B	21729

Analysis Batch: 22079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12310-1	S-1,0.5	Total/NA	Solid	Total BTEX	
880-12310-2	S-1, 1	Total/NA	Solid	Total BTEX	
880-12310-3	S-2,0.5	Total/NA	Solid	Total BTEX	
880-12310-4	S-2,1	Total/NA	Solid	Total BTEX	
880-12310-5	S-3,0.5	Total/NA	Solid	Total BTEX	
880-12310-6	S-4,0.5	Total/NA	Solid	Total BTEX	
880-12310-7	S-4,1	Total/NA	Solid	Total BTEX	
880-12310-8	S-5,0.5	Total/NA	Solid	Total BTEX	
880-12310-9	S-5,1	Total/NA	Solid	Total BTEX	
880-12310-10	S-6,0.5	Total/NA	Solid	Total BTEX	
880-12310-11	S-6,1	Total/NA	Solid	Total BTEX	
880-12310-12	S-7,0.5	Total/NA	Solid	Total BTEX	
880-12310-13	S-7,1	Total/NA	Solid	Total BTEX	
880-12310-14	S-8,0.5	Total/NA	Solid	Total BTEX	
880-12310-15	S-8,1	Total/NA	Solid	Total BTEX	
880-12310-16	S-4,2'	Total/NA	Solid	Total BTEX	
880-12310-17	S-4,3'	Total/NA	Solid	Total BTEX	
880-12310-18	S-4,4.5'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 21458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12310-1	S-1,0.5	Total/NA	Solid	8015B NM	21475
880-12310-2	S-1, 1	Total/NA	Solid	8015B NM	21475
880-12310-3	S-2,0.5	Total/NA	Solid	8015B NM	21475
880-12310-4	S-2,1	Total/NA	Solid	8015B NM	21475
880-12310-5	S-3,0.5	Total/NA	Solid	8015B NM	21475
880-12310-6	S-4,0.5	Total/NA	Solid	8015B NM	21475
880-12310-7	S-4,1	Total/NA	Solid	8015B NM	21475
880-12310-8	S-5,0.5	Total/NA	Solid	8015B NM	21475
880-12310-9	S-5,1	Total/NA	Solid	8015B NM	21475
880-12310-10	S-6,0.5	Total/NA	Solid	8015B NM	21475
880-12310-11	S-6,1	Total/NA	Solid	8015B NM	21475
880-12310-12	S-7,0.5	Total/NA	Solid	8015B NM	21475
880-12310-13	S-7,1	Total/NA	Solid	8015B NM	21475
880-12310-14	S-8,0.5	Total/NA	Solid	8015B NM	21475
880-12310-15	S-8,1	Total/NA	Solid	8015B NM	21475
880-12310-16	S-4,2'	Total/NA	Solid	8015B NM	21475
880-12310-17	S-4,3'	Total/NA	Solid	8015B NM	21475
880-12310-18	S-4,4.5'	Total/NA	Solid	8015B NM	21475
MB 880-21475/1-A	Method Blank	Total/NA	Solid	8015B NM	21475
LCS 880-21475/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	21475
LCSD 880-21475/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	21475
880-12310-1 MS	S-1,0.5	Total/NA	Solid	8015B NM	21475

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

GC Semi VOA (Continued)

Analysis Batch: 21458 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12310-1 MSD	S-1,0.5	Total/NA	Solid	8015B NM	21475

Prep Batch: 21475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12310-1	S-1,0.5	Total/NA	Solid	8015NM Prep	
880-12310-2	S-1, 1	Total/NA	Solid	8015NM Prep	
880-12310-3	S-2,0.5	Total/NA	Solid	8015NM Prep	
880-12310-4	S-2,1	Total/NA	Solid	8015NM Prep	
880-12310-5	S-3,0.5	Total/NA	Solid	8015NM Prep	
880-12310-6	S-4,0.5	Total/NA	Solid	8015NM Prep	
880-12310-7	S-4,1	Total/NA	Solid	8015NM Prep	
880-12310-8	S-5,0.5	Total/NA	Solid	8015NM Prep	
880-12310-9	S-5,1	Total/NA	Solid	8015NM Prep	
880-12310-10	S-6,0.5	Total/NA	Solid	8015NM Prep	
880-12310-11	S-6,1	Total/NA	Solid	8015NM Prep	
880-12310-12	S-7,0.5	Total/NA	Solid	8015NM Prep	
880-12310-13	S-7,1	Total/NA	Solid	8015NM Prep	
880-12310-14	S-8,0.5	Total/NA	Solid	8015NM Prep	
880-12310-15	S-8,1	Total/NA	Solid	8015NM Prep	
880-12310-16	S-4,2'	Total/NA	Solid	8015NM Prep	
880-12310-17	S-4,3'	Total/NA	Solid	8015NM Prep	
880-12310-18	S-4,4.5'	Total/NA	Solid	8015NM Prep	
MB 880-21475/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-21475/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-21475/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-12310-1 MS	S-1,0.5	Total/NA	Solid	8015NM Prep	
880-12310-1 MSD	S-1,0.5	Total/NA	Solid	8015NM Prep	

Analysis Batch: 21626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12310-1	S-1,0.5	Total/NA	Solid	8015 NM	
880-12310-2	S-1, 1	Total/NA	Solid	8015 NM	
880-12310-3	S-2,0.5	Total/NA	Solid	8015 NM	
880-12310-4	S-2,1	Total/NA	Solid	8015 NM	
880-12310-5	S-3,0.5	Total/NA	Solid	8015 NM	
880-12310-6	S-4,0.5	Total/NA	Solid	8015 NM	
880-12310-7	S-4,1	Total/NA	Solid	8015 NM	
880-12310-8	S-5,0.5	Total/NA	Solid	8015 NM	
880-12310-9	S-5,1	Total/NA	Solid	8015 NM	
880-12310-10	S-6,0.5	Total/NA	Solid	8015 NM	
880-12310-11	S-6,1	Total/NA	Solid	8015 NM	
880-12310-12	S-7,0.5	Total/NA	Solid	8015 NM	
880-12310-13	S-7,1	Total/NA	Solid	8015 NM	
880-12310-14	S-8,0.5	Total/NA	Solid	8015 NM	
880-12310-15	S-8,1	Total/NA	Solid	8015 NM	
880-12310-16	S-4,2'	Total/NA	Solid	8015 NM	
880-12310-17	S-4,3'	Total/NA	Solid	8015 NM	
880-12310-18	S-4,4.5'	Total/NA	Solid	8015 NM	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

HPLC/IC

Leach Batch: 21600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12310-1	S-1,0.5	Soluble	Solid	DI Leach	
880-12310-2	S-1, 1	Soluble	Solid	DI Leach	
880-12310-3	S-2,0.5	Soluble	Solid	DI Leach	
880-12310-4	S-2,1	Soluble	Solid	DI Leach	
880-12310-5	S-3,0.5	Soluble	Solid	DI Leach	
880-12310-6	S-4,0.5	Soluble	Solid	DI Leach	
880-12310-7	S-4,1	Soluble	Solid	DI Leach	
880-12310-8	S-5,0.5	Soluble	Solid	DI Leach	
880-12310-9	S-5,1	Soluble	Solid	DI Leach	
880-12310-10	S-6,0.5	Soluble	Solid	DI Leach	
880-12310-11	S-6,1	Soluble	Solid	DI Leach	
880-12310-12	S-7,0.5	Soluble	Solid	DI Leach	
MB 880-21600/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21600/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21600/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12310-7 MS	S-4,1	Soluble	Solid	DI Leach	
880-12310-7 MSD	S-4,1	Soluble	Solid	DI Leach	

Leach Batch: 21601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12310-13	S-7,1	Soluble	Solid	DI Leach	
880-12310-14	S-8,0.5	Soluble	Solid	DI Leach	
880-12310-15	S-8,1	Soluble	Solid	DI Leach	
880-12310-16	S-4,2'	Soluble	Solid	DI Leach	
880-12310-17	S-4,3'	Soluble	Solid	DI Leach	
880-12310-18	S-4,4.5'	Soluble	Solid	DI Leach	
MB 880-21601/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21601/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21601/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12310-13 MS	S-7,1	Soluble	Solid	DI Leach	
880-12310-13 MSD	S-7,1	Soluble	Solid	DI Leach	

Analysis Batch: 22122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12310-1	S-1,0.5	Soluble	Solid	300.0	21600
880-12310-2	S-1, 1	Soluble	Solid	300.0	21600
880-12310-3	S-2,0.5	Soluble	Solid	300.0	21600
880-12310-4	S-2,1	Soluble	Solid	300.0	21600
880-12310-5	S-3,0.5	Soluble	Solid	300.0	21600
880-12310-6	S-4,0.5	Soluble	Solid	300.0	21600
880-12310-7	S-4,1	Soluble	Solid	300.0	21600
880-12310-8	S-5,0.5	Soluble	Solid	300.0	21600
880-12310-9	S-5,1	Soluble	Solid	300.0	21600
880-12310-10	S-6,0.5	Soluble	Solid	300.0	21600
880-12310-11	S-6,1	Soluble	Solid	300.0	21600
880-12310-12	S-7,0.5	Soluble	Solid	300.0	21600
MB 880-21600/1-A	Method Blank	Soluble	Solid	300.0	21600
LCS 880-21600/2-A	Lab Control Sample	Soluble	Solid	300.0	21600
LCSD 880-21600/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21600
880-12310-7 MS	S-4,1	Soluble	Solid	300.0	21600
880-12310-7 MSD	S-4,1	Soluble	Solid	300.0	21600

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

HPLC/IC

Analysis Batch: 22135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12310-13	S-7,1	Soluble	Solid	300.0	21601
880-12310-14	S-8,0.5	Soluble	Solid	300.0	21601
880-12310-15	S-8,1	Soluble	Solid	300.0	21601
880-12310-16	S-4,2'	Soluble	Solid	300.0	21601
880-12310-17	S-4,3'	Soluble	Solid	300.0	21601
880-12310-18	S-4,4.5'	Soluble	Solid	300.0	21601
MB 880-21601/1-A	Method Blank	Soluble	Solid	300.0	21601
LCS 880-21601/2-A	Lab Control Sample	Soluble	Solid	300.0	21601
LCSD 880-21601/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21601
880-12310-13 MS	S-7,1	Soluble	Solid	300.0	21601
880-12310-13 MSD	S-7,1	Soluble	Solid	300.0	21601

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-1,0.5

Lab Sample ID: 880-12310-1

Date Collected: 03/09/22 12:00

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/19/22 23:50	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/14/22 21:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		10			22122	03/24/22 21:27	CH	XEN MID

Client Sample ID: S-1, 1

Lab Sample ID: 880-12310-2

Date Collected: 03/09/22 12:05

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	21729	03/16/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 00:11	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/14/22 23:00	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		10			22122	03/24/22 21:54	CH	XEN MID

Client Sample ID: S-2,0.5

Lab Sample ID: 880-12310-3

Date Collected: 03/09/22 12:15

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 00:31	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/14/22 23:22	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		10			22122	03/24/22 22:03	CH	XEN MID

Client Sample ID: S-2,1

Lab Sample ID: 880-12310-4

Date Collected: 03/09/22 12:20

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 00:51	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-2,1

Lab Sample ID: 880-12310-4

Date Collected: 03/09/22 12:20

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/14/22 23:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		10			22122	03/24/22 22:12	CH	XEN MID

Client Sample ID: S-3,0.5

Lab Sample ID: 880-12310-5

Date Collected: 03/09/22 12:30

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 01:12	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 00:03	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		5			22122	03/24/22 22:20	CH	XEN MID

Client Sample ID: S-4,0.5

Lab Sample ID: 880-12310-6

Date Collected: 03/09/22 12:35

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 01:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 00:23	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		10			22122	03/24/22 22:29	CH	XEN MID

Client Sample ID: S-4,1

Lab Sample ID: 880-12310-7

Date Collected: 03/09/22 12:36

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 01:53	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 00:43	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-4,1

Lab Sample ID: 880-12310-7

Date Collected: 03/09/22 12:36

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		10			22122	03/24/22 22:38	CH	XEN MID

Client Sample ID: S-5,0.5

Lab Sample ID: 880-12310-8

Date Collected: 03/09/22 12:50

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 02:13	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 01:04	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		1			22122	03/24/22 23:05	CH	XEN MID

Client Sample ID: S-5,1

Lab Sample ID: 880-12310-9

Date Collected: 03/09/22 12:51

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 02:34	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 01:24	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		1			22122	03/24/22 23:13	CH	XEN MID

Client Sample ID: S-6,0.5

Lab Sample ID: 880-12310-10

Date Collected: 03/09/22 13:00

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 02:54	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 01:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		1			22122	03/24/22 23:40	CH	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-6,1

Lab Sample ID: 880-12310-11

Date Collected: 03/09/22 13:05

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 04:17	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 02:24	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		1			22122	03/24/22 23:49	CH	XEN MID

Client Sample ID: S-7,0.5

Lab Sample ID: 880-12310-12

Date Collected: 03/09/22 13:20

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 04:37	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 02:45	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	21600	03/15/22 08:29	CH	XEN MID
Soluble	Analysis	300.0		10			22122	03/24/22 23:58	CH	XEN MID

Client Sample ID: S-7,1

Lab Sample ID: 880-12310-13

Date Collected: 03/09/22 13:25

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 04:58	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 03:04	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21601	03/15/22 08:31	CH	XEN MID
Soluble	Analysis	300.0		5			22135	03/25/22 08:59	CH	XEN MID

Client Sample ID: S-8,0.5

Lab Sample ID: 880-12310-14

Date Collected: 03/09/22 13:40

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 05:18	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-8,0.5

Lab Sample ID: 880-12310-14

Date Collected: 03/09/22 13:40

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 03:24	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	21601	03/15/22 08:31	CH	XEN MID
Soluble	Analysis	300.0		1			22135	03/25/22 09:25	CH	XEN MID

Client Sample ID: S-8,1

Lab Sample ID: 880-12310-15

Date Collected: 03/09/22 13:45

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 05:38	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 03:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	21601	03/15/22 08:31	CH	XEN MID
Soluble	Analysis	300.0		1			22135	03/25/22 09:34	CH	XEN MID

Client Sample ID: S-4,2'

Lab Sample ID: 880-12310-16

Date Collected: 03/09/22 12:37

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 05:59	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 04:05	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	21601	03/15/22 08:31	CH	XEN MID
Soluble	Analysis	300.0		5			22135	03/25/22 09:43	CH	XEN MID

Client Sample ID: S-4,3'

Lab Sample ID: 880-12310-17

Date Collected: 03/09/22 12:38

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 06:19	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 04:24	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Client Sample ID: S-4,3'

Lab Sample ID: 880-12310-17

Date Collected: 03/09/22 12:38

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	21601	03/15/22 08:31	CH	XEN MID
Soluble	Analysis	300.0		1			22135	03/25/22 09:52	CH	XEN MID

Client Sample ID: S-4,4.5'

Lab Sample ID: 880-12310-18

Date Collected: 03/09/22 12:39

Matrix: Solid

Date Received: 03/10/22 15:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	21729	03/18/22 12:55	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21936	03/20/22 06:40	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22079	03/21/22 13:26	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21626	03/15/22 10:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21475	03/14/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21458	03/15/22 04:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21601	03/15/22 08:31	CH	XEN MID
Soluble	Analysis	300.0		1			22135	03/25/22 15:11	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Midland

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom SWD

Job ID: 880-12310-1
SDG: 22-0105-02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-12310-1	S-1,0.5	Solid	03/09/22 12:00	03/10/22 15:05
880-12310-2	S-1, 1	Solid	03/09/22 12:05	03/10/22 15:05
880-12310-3	S-2,0.5	Solid	03/09/22 12:15	03/10/22 15:05
880-12310-4	S-2,1	Solid	03/09/22 12:20	03/10/22 15:05
880-12310-5	S-3,0.5	Solid	03/09/22 12:30	03/10/22 15:05
880-12310-6	S-4,0.5	Solid	03/09/22 12:35	03/10/22 15:05
880-12310-7	S-4,1	Solid	03/09/22 12:36	03/10/22 15:05
880-12310-8	S-5,0.5	Solid	03/09/22 12:50	03/10/22 15:05
880-12310-9	S-5,1	Solid	03/09/22 12:51	03/10/22 15:05
880-12310-10	S-6,0.5	Solid	03/09/22 13:00	03/10/22 15:05
880-12310-11	S-6,1	Solid	03/09/22 13:05	03/10/22 15:05
880-12310-12	S-7,0.5	Solid	03/09/22 13:20	03/10/22 15:05
880-12310-13	S-7,1	Solid	03/09/22 13:25	03/10/22 15:05
880-12310-14	S-8,0.5	Solid	03/09/22 13:40	03/10/22 15:05
880-12310-15	S-8,1	Solid	03/09/22 13:45	03/10/22 15:05
880-12310-16	S-4,2'	Solid	03/09/22 12:37	03/10/22 15:05
880-12310-17	S-4,3'	Solid	03/09/22 12:38	03/10/22 15:05
880-12310-18	S-4,4.5'	Solid	03/09/22 12:39	03/10/22 15:05

Aarson & Associates, Inc.

Environmental Consultants

507 N. Marengfeld, Ste 202
Midland, TX 79701
432-687-0901

DATE 3/10/2022 PAGE 1 OF 2

PO#: _____ LAB WORK ORDER# _____

PROJECT LOCATION OR NAME: Melstern scud

LAI PROJECT #. 22-0125-02 COLLECTOR: TPD + JTR

Data Reported to _____

TRRP report? ☐ Yes ☒ No

TIME ZONE _____
Time zone/State _____

S=SOIL
W=WATER
A=AIR

P=PAINT
SL=SLUDGE
OT=OTHER

Field Sample ID

Field Sample ID	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO ₃	H ₂ SO ₄ ☐ NaOH ☐	ICE	UNPRESERVED
S-1, 0.5		3/9/22	1200	S	1				X	X
S-1, 1			1205							X
S-2, 0.5			1215							X
S-2, 1			1220							X
S-3, 0.5			1230							X
S-3, 1										X
S-4, 0.5			1235							X
S-4, 1			1236							X
S-5, 0.5			1250							X
S-5, 1			1251							X
S-6, 0.5			1300							X
S-6, 1			1305							X
S-7, 0.5			1320							X
S-7, 1			1325							X
S-8, 0.5			1340							X
TOTAL										

RELINQUISHED BY (Signature) _____ DATE/TIME 3/10/22 1505 RECEIVED BY (Signature) _____

RELINQUISHED BY (Signature) _____ DATE/TIME _____ RECEIVED BY (Signature) _____

RELINQUISHED BY (Signature) _____ DATE/TIME _____ RECEIVED BY (Signature) _____

LABORATORY Xeno

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 41 THERM# TEC
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☒ CARRIER BILL # _____
☒ HAND DELIVERED

880-12310 Chain of Custody

ANALYSES

BTEX ☐ MTBE ☐ TPH 418 ☐ TPH 1005 ☐ TPH 1008 ☐

GASOLINE MOD 8015 ☐

DIESEL - MOD 8015 ☐

OIL - MOD 8015 ☐

VOC 8260 ☐

SVOC 8270 ☐

8081 PESTICIDES ☐ 8151 HERBICIDES ☐

8082 PCBs ☐

TCLP - METALS (RCRA) ☐ TCLP VOC ☐

TCLP - PEST ☐ HERB ☐ Semi-VOC ☐

TOTAL METALS (RCRA) ☐ OTHER LIST ☐

LEAD - TOTAL ☐ P W 2008 ☐ TCLP ☐

RO ☐ TOX ☐ FLASHPOINT ☐

TDS ☐ TSS ☐ % MOISTURE ☐

pH ☐ HEXAVALENT CHROMIUM ☐

EXPLOSIVES ☐ PECTHLORATE ☐

CHLORIDES ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

Varson & Associates, Inc.
Environmental Consultants

507 N Marenefield, Ste 202
Midland, TX 79701
432-687-0901

Date Reported to

DATE: 3/10/22 PAGE 2 OF 2
PO#: _____ LAB WORK ORDER#: _____
PROJECT LOCATION OR NAME: Melkshon SWD
LAI PROJECT #: 22-0105-02 COLLECTOR: JD & JR

TRRP report?
☐ Yes ☒ No

S=SOIL
W=WATER
A=AIR

P=PAINT
SL=SLUDGE
OT=OTHER

TIME ZONE
Time zone/State

MST/AM

Field
Sample ID

Lab #

Date

Time

Matrix

of Containers

HCl

HNO₃

H₂SO₄ ☐ NaOH ☐

ICE

UNPRESERVED

ANALYSES

BTEX ☒ MTBE ☐ TPH 1005 ☐ TPH 1006 ☐
TRPH 418 ☐
GASOLINE MOD 8015 ☒
DIESEL - MOD 8015 ☒
OIL - MOD 8015 ☒
VOC 8260 ☒
SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
8081 PESTICIDES ☐ 8151 HERBICIDES ☐
TCIP - METALS (RCRA) ☐ TCLP VOC ☐
TOTAL METALS (RCRA) ☐ OTHER LIST ☐
LEAD - TOTAL ☐ DW 200.8 ☐ TCLP ☐
RCI ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
PH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PCHLORATE ☐
CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

S-2,1
S-4,2
S-4,3
S-4,4

3/9/22 1345 S 1
1237 1238 1239

TOTAL

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

TURN AROUND TIME

RELINQUISHED BY (Signature)

DATE/TIME

RECEIVED BY (Signature)

NORMAL ☒

1 DAY ☐

2 DAY ☐

OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP 21

THERM# 188

CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED

CARRIER BILL # _____

LABORATORY Kenco

DATE/TIME

RECEIVED BY (Signature)

DATE/TIME

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-12310-1

SDG Number: 22-0105-02

Login Number: 12310**List Number: 1****Creator: Teel, Brianna****List Source: Eurofins Midland**

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	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-14445-1

Laboratory Sample Delivery Group: 22-0105-02

Client Project/Site: Maelstrom

For:

Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

A handwritten signature in cursive script that reads "Holly Taylor".

Authorized for release by:

5/17/2022 4:42:44 PM

Holly Taylor, Project Manager
(806)794-1296

Holly.Taylor@et.eurofinsus.com

LINKS

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results through



Have a Question?



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www.eurofinsus.com/Env

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

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

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Laboratory Job ID: 880-14445-1
SDG: 22-0105-02

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Job ID: 880-14445-1

Laboratory: Eurofins Midland

Narrative

Job Narrative 880-14445-1

Comments

No additional comments.

Receipt

The samples were received on 5/5/2022 9:12 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.2° C.

Receipt Exceptions

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): S-3 15.0' (880-14445-23) Mark Larson was contacted by phone and he instructed the lab to analyze the sample.

GC VOA

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-25413 recovered above the upper control limit for Benzene and Ethylbenzene. The samples associated with this CCV were ran within 12 hrs. of passing CCV's for the affected analytes; therefore, the data have been reported.

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

GC Semi VOA

Method 8015B NM: Surrogate recovery for the following samples were outside control limits: S-7 1.0' (880-14445-17), (LCSD 880-24946/3-A) and (MB 880-24946/1-A). Evidence of matrix interferences is not obvious.

Method 8015B NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-25059/3-A). 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.

General Chemistry

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-24904 and analytical batch 880-25285 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.

Organic Prep

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

VOA Prep

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-1 1.0'

Lab Sample ID: 880-14445-1

Date Collected: 05/03/22 14:30

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/12/22 10:53	05/12/22 21:24	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/12/22 10:53	05/12/22 21:24	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/12/22 10:53	05/12/22 21:24	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		05/12/22 10:53	05/12/22 21:24	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/12/22 10:53	05/12/22 21:24	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/12/22 10:53	05/12/22 21:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	05/12/22 10:53	05/12/22 21:24	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/12/22 10:53	05/12/22 21:24	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/06/22 08:55	05/07/22 16:29	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/06/22 08:55	05/07/22 16:29	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/06/22 08:55	05/07/22 16:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	114		70 - 130	05/06/22 08:55	05/07/22 16:29	1
o-Terphenyl (Surr)	124		70 - 130	05/06/22 08:55	05/07/22 16:29	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3400		49.8	mg/Kg			05/11/22 01:23	10

Client Sample ID: S-1 3.0'

Lab Sample ID: 880-14445-2

Date Collected: 05/03/22 14:31

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/12/22 10:53	05/12/22 21:45	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/12/22 10:53	05/12/22 21:45	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/12/22 10:53	05/12/22 21:45	1
m,p-Xylenes	<0.00403	U	0.00403	mg/Kg		05/12/22 10:53	05/12/22 21:45	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/12/22 10:53	05/12/22 21:45	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/12/22 10:53	05/12/22 21:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	05/12/22 10:53	05/12/22 21:45	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/12/22 10:53	05/12/22 21:45	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-1 3.0'

Lab Sample ID: 880-14445-2

Date Collected: 05/03/22 14:31

Matrix: Solid

Date Received: 05/05/22 09:12

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 16:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 16:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 16:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	104		70 - 130			05/06/22 08:55	05/07/22 16:51	1
o-Terphenyl (Surr)	114		70 - 130			05/06/22 08:55	05/07/22 16:51	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	516		4.96	mg/Kg			05/11/22 01:31	1

Client Sample ID: S-1 5.0'

Lab Sample ID: 880-14445-3

Date Collected: 05/03/22 14:32

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 19:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 19:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 19:11	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/12/22 19:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 19:11	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/12/22 19:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			05/10/22 14:04	05/12/22 19:11	1
1,4-Difluorobenzene (Surr)	95		70 - 130			05/10/22 14:04	05/12/22 19:11	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/22 08:55	05/07/22 17:13	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/22 08:55	05/07/22 17:13	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-1 5.0'

Lab Sample ID: 880-14445-3

Date Collected: 05/03/22 14:32

Matrix: Solid

Date Received: 05/05/22 09:12

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/22 08:55	05/07/22 17:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	100		70 - 130			05/06/22 08:55	05/07/22 17:13	1
o-Terphenyl (Surr)	108		70 - 130			05/06/22 08:55	05/07/22 17:13	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.3		5.04	mg/Kg			05/11/22 01:39	1

Client Sample ID: S-1 10'

Lab Sample ID: 880-14445-4

Date Collected: 05/03/22 14:33

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 19:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 19:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 19:37	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/12/22 19:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 19:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/12/22 19:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			05/10/22 14:04	05/12/22 19:37	1
1,4-Difluorobenzene (Surr)	100		70 - 130			05/10/22 14:04	05/12/22 19:37	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 17:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 17:57	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 17:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	103		70 - 130			05/06/22 08:55	05/07/22 17:57	1
o-Terphenyl (Surr)	111		70 - 130			05/06/22 08:55	05/07/22 17:57	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.74		5.00	mg/Kg			05/11/22 01:48	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-2 1.0'

Lab Sample ID: 880-14445-5

Date Collected: 05/03/22 13:10

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 20:02	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 20:02	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 20:02	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/12/22 20:02	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 20:02	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/12/22 20:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	05/10/22 14:04	05/12/22 20:02	1
1,4-Difluorobenzene (Surr)	104		70 - 130	05/10/22 14:04	05/12/22 20:02	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/06/22 08:55	05/07/22 18:19	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/06/22 08:55	05/07/22 18:19	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/06/22 08:55	05/07/22 18:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	95		70 - 130	05/06/22 08:55	05/07/22 18:19	1
o-Terphenyl (Surr)	104		70 - 130	05/06/22 08:55	05/07/22 18:19	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6950		49.9	mg/Kg			05/11/22 01:56	10

Client Sample ID: S-2 3.0'

Lab Sample ID: 880-14445-6

Date Collected: 05/03/22 13:11

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 20:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 20:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 20:28	1
m,p-Xylenes	<0.00401	U	0.00401	mg/Kg		05/10/22 14:04	05/12/22 20:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 20:28	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/10/22 14:04	05/12/22 20:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	05/10/22 14:04	05/12/22 20:28	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/10/22 14:04	05/12/22 20:28	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-2 3.0'

Lab Sample ID: 880-14445-6

Date Collected: 05/03/22 13:11

Matrix: Solid

Date Received: 05/05/22 09:12

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 18:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 18:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 18:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	106		70 - 130			05/06/22 08:55	05/07/22 18:41	1
o-Terphenyl (Surr)	114		70 - 130			05/06/22 08:55	05/07/22 18:41	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1040		5.03	mg/Kg			05/11/22 02:04	1

Client Sample ID: S-2 5.0'

Lab Sample ID: 880-14445-7

Date Collected: 05/03/22 13:12

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/12/22 20:54	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/12/22 20:54	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/12/22 20:54	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		05/10/22 14:04	05/12/22 20:54	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/12/22 20:54	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/10/22 14:04	05/12/22 20:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			05/10/22 14:04	05/12/22 20:54	1
1,4-Difluorobenzene (Surr)	96		70 - 130			05/10/22 14:04	05/12/22 20:54	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 19:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 19:04	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-2 5.0'

Lab Sample ID: 880-14445-7

Date Collected: 05/03/22 13:12

Matrix: Solid

Date Received: 05/05/22 09:12

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 19:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	95		70 - 130			05/06/22 08:55	05/07/22 19:04	1
o-Terphenyl (Surr)	100		70 - 130			05/06/22 08:55	05/07/22 19:04	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	87.8		5.02	mg/Kg			05/11/22 02:29	1

Client Sample ID: S-2 10'

Lab Sample ID: 880-14445-8

Date Collected: 05/03/22 13:13

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/10/22 14:04	05/12/22 21:21	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/10/22 14:04	05/12/22 21:21	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/10/22 14:04	05/12/22 21:21	1
m,p-Xylenes	<0.00403	U	0.00403	mg/Kg		05/10/22 14:04	05/12/22 21:21	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/10/22 14:04	05/12/22 21:21	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/10/22 14:04	05/12/22 21:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			05/10/22 14:04	05/12/22 21:21	1
1,4-Difluorobenzene (Surr)	96		70 - 130			05/10/22 14:04	05/12/22 21:21	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 19:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 19:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 19:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	104		70 - 130			05/06/22 08:55	05/07/22 19:26	1
o-Terphenyl (Surr)	109		70 - 130			05/06/22 08:55	05/07/22 19:26	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.8		5.00	mg/Kg			05/11/22 02:37	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-3 1.0'

Lab Sample ID: 880-14445-9

Date Collected: 05/03/22 12:40

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 21:47	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 21:47	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 21:47	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/12/22 21:47	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 21:47	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/12/22 21:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	05/10/22 14:04	05/12/22 21:47	1
1,4-Difluorobenzene (Surr)	106		70 - 130	05/10/22 14:04	05/12/22 21:47	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 19:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 19:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 19:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	103		70 - 130	05/06/22 08:55	05/07/22 19:48	1
o-Terphenyl (Surr)	111		70 - 130	05/06/22 08:55	05/07/22 19:48	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7360		50.0	mg/Kg			05/11/22 03:01	10

Client Sample ID: S-3 3.0'

Lab Sample ID: 880-14445-10

Date Collected: 05/03/22 12:41

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 22:13	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 22:13	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 22:13	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/12/22 22:13	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 22:13	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/12/22 22:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	05/10/22 14:04	05/12/22 22:13	1
1,4-Difluorobenzene (Surr)	106		70 - 130	05/10/22 14:04	05/12/22 22:13	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-3 3.0'

Lab Sample ID: 880-14445-10

Date Collected: 05/03/22 12:41

Matrix: Solid

Date Received: 05/05/22 09:12

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 20:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 20:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 20:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	106		70 - 130			05/06/22 08:55	05/07/22 20:10	1
o-Terphenyl (Surr)	115		70 - 130			05/06/22 08:55	05/07/22 20:10	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	907		5.04	mg/Kg			05/11/22 03:10	1

Client Sample ID: S-3 5.0'

Lab Sample ID: 880-14445-11

Date Collected: 05/03/22 12:42

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 22:40	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 22:40	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 22:40	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/12/22 22:40	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/12/22 22:40	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/12/22 22:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			05/10/22 14:04	05/12/22 22:40	1
1,4-Difluorobenzene (Surr)	104		70 - 130			05/10/22 14:04	05/12/22 22:40	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/22 08:55	05/07/22 20:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/22 08:55	05/07/22 20:31	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-3 5.0'

Lab Sample ID: 880-14445-11

Date Collected: 05/03/22 12:42

Matrix: Solid

Date Received: 05/05/22 09:12

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/22 08:55	05/07/22 20:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	110		70 - 130			05/06/22 08:55	05/07/22 20:31	1
o-Terphenyl (Surr)	118		70 - 130			05/06/22 08:55	05/07/22 20:31	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	188		5.05	mg/Kg			05/11/22 03:18	1

Client Sample ID: S-3 10'

Lab Sample ID: 880-14445-12

Date Collected: 05/03/22 12:43

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 23:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 23:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 23:06	1
m,p-Xylenes	<0.00401	U	0.00401	mg/Kg		05/10/22 14:04	05/12/22 23:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 23:06	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/10/22 14:04	05/12/22 23:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			05/10/22 14:04	05/12/22 23:06	1
1,4-Difluorobenzene (Surr)	96		70 - 130			05/10/22 14:04	05/12/22 23:06	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/22 08:55	05/07/22 20:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/22 08:55	05/07/22 20:53	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/22 08:55	05/07/22 20:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	102		70 - 130			05/06/22 08:55	05/07/22 20:53	1
o-Terphenyl (Surr)	109		70 - 130			05/06/22 08:55	05/07/22 20:53	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.8		4.99	mg/Kg			05/11/22 03:26	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-4 1.0'

Lab Sample ID: 880-14445-13

Date Collected: 05/03/22 12:20

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/13/22 00:52	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/13/22 00:52	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/13/22 00:52	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		05/10/22 14:04	05/13/22 00:52	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/13/22 00:52	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/10/22 14:04	05/13/22 00:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	05/10/22 14:04	05/13/22 00:52	1
1,4-Difluorobenzene (Surr)	103		70 - 130	05/10/22 14:04	05/13/22 00:52	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/06/22 08:55	05/07/22 21:15	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/06/22 08:55	05/07/22 21:15	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/06/22 08:55	05/07/22 21:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	95		70 - 130	05/06/22 08:55	05/07/22 21:15	1
o-Terphenyl (Surr)	99		70 - 130	05/06/22 08:55	05/07/22 21:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5080		49.8	mg/Kg			05/11/22 03:34	10

Client Sample ID: S-4 3.0'

Lab Sample ID: 880-14445-14

Date Collected: 05/03/22 12:21

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/10/22 14:04	05/13/22 01:19	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/10/22 14:04	05/13/22 01:19	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/10/22 14:04	05/13/22 01:19	1
m,p-Xylenes	<0.00403	U	0.00403	mg/Kg		05/10/22 14:04	05/13/22 01:19	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/10/22 14:04	05/13/22 01:19	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/10/22 14:04	05/13/22 01:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	05/10/22 14:04	05/13/22 01:19	1
1,4-Difluorobenzene (Surr)	105		70 - 130	05/10/22 14:04	05/13/22 01:19	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-4 3.0'

Lab Sample ID: 880-14445-14

Date Collected: 05/03/22 12:21

Matrix: Solid

Date Received: 05/05/22 09:12

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 02:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 02:23	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 02:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	95		70 - 130			05/06/22 14:38	05/08/22 02:23	1
o-Terphenyl (Surr)	102		70 - 130			05/06/22 14:38	05/08/22 02:23	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	761		4.95	mg/Kg			05/11/22 03:42	1

Client Sample ID: S-4 5.0'

Lab Sample ID: 880-14445-15

Date Collected: 05/03/22 12:22

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 01:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 01:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 01:45	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/13/22 01:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 01:45	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/13/22 01:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130			05/10/22 14:04	05/13/22 01:45	1
1,4-Difluorobenzene (Surr)	99		70 - 130			05/10/22 14:04	05/13/22 01:45	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/22 14:38	05/08/22 02:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/22 14:38	05/08/22 02:43	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-4 5.0'

Lab Sample ID: 880-14445-15

Date Collected: 05/03/22 12:22

Matrix: Solid

Date Received: 05/05/22 09:12

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/22 14:38	05/08/22 02:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	116		70 - 130			05/06/22 14:38	05/08/22 02:43	1
o-Terphenyl (Surr)	125		70 - 130			05/06/22 14:38	05/08/22 02:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	185		4.97	mg/Kg			05/11/22 03:51	1

Client Sample ID: S-4 10'

Lab Sample ID: 880-14445-16

Date Collected: 05/03/22 12:23

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 02:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 02:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 02:11	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/13/22 02:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 02:11	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/13/22 02:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			05/10/22 14:04	05/13/22 02:11	1
1,4-Difluorobenzene (Surr)	103		70 - 130			05/10/22 14:04	05/13/22 02:11	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 03:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 03:23	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 03:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	100		70 - 130			05/06/22 14:38	05/08/22 03:23	1
o-Terphenyl (Surr)	110		70 - 130			05/06/22 14:38	05/08/22 03:23	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.0		4.99	mg/Kg			05/11/22 14:07	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-7 1.0'

Lab Sample ID: 880-14445-17

Date Collected: 05/03/22 15:10

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 02:38	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 02:38	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 02:38	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/13/22 02:38	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 02:38	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/13/22 02:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	05/10/22 14:04	05/13/22 02:38	1
1,4-Difluorobenzene (Surr)	93		70 - 130	05/10/22 14:04	05/13/22 02:38	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/06/22 14:38	05/08/22 03:44	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/06/22 14:38	05/08/22 03:44	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/06/22 14:38	05/08/22 03:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	121		70 - 130	05/06/22 14:38	05/08/22 03:44	1
o-Terphenyl (Surr)	134	S1+	70 - 130	05/06/22 14:38	05/08/22 03:44	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3710		24.8	mg/Kg			05/11/22 14:31	5

Client Sample ID: S-7 3.0'

Lab Sample ID: 880-14445-18

Date Collected: 05/03/22 15:11

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 03:05	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 03:05	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 03:05	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/13/22 03:05	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 03:05	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/13/22 03:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	05/10/22 14:04	05/13/22 03:05	1
1,4-Difluorobenzene (Surr)	103		70 - 130	05/10/22 14:04	05/13/22 03:05	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-7 3.0'

Lab Sample ID: 880-14445-18

Date Collected: 05/03/22 15:11

Matrix: Solid

Date Received: 05/05/22 09:12

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 04:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 04:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 04:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	117		70 - 130			05/06/22 14:38	05/08/22 04:04	1
o-Terphenyl (Surr)	128		70 - 130			05/06/22 14:38	05/08/22 04:04	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		5.01	mg/Kg			05/11/22 14:40	1

Client Sample ID: S-7 5.0'

Lab Sample ID: 880-14445-19

Date Collected: 05/03/22 15:12

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 03:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 03:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 03:32	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/13/22 03:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 03:32	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/13/22 03:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			05/10/22 14:04	05/13/22 03:32	1
1,4-Difluorobenzene (Surr)	103		70 - 130			05/10/22 14:04	05/13/22 03:32	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 04:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 04:24	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-7 5.0'

Lab Sample ID: 880-14445-19

Date Collected: 05/03/22 15:12

Matrix: Solid

Date Received: 05/05/22 09:12

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 04:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	116		70 - 130			05/06/22 14:38	05/08/22 04:24	1
o-Terphenyl (Surr)	125		70 - 130			05/06/22 14:38	05/08/22 04:24	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	96.0		4.98	mg/Kg			05/11/22 14:48	1

Client Sample ID: S-7 10'

Lab Sample ID: 880-14445-20

Date Collected: 05/03/22 15:13

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/13/22 03:59	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/13/22 03:59	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/13/22 03:59	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		05/10/22 14:04	05/13/22 03:59	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/10/22 14:04	05/13/22 03:59	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/10/22 14:04	05/13/22 03:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			05/10/22 14:04	05/13/22 03:59	1
1,4-Difluorobenzene (Surr)	92		70 - 130			05/10/22 14:04	05/13/22 03:59	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 04:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 04:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 04:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	106		70 - 130			05/06/22 14:38	05/08/22 04:44	1
o-Terphenyl (Surr)	117		70 - 130			05/06/22 14:38	05/08/22 04:44	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16.8		5.00	mg/Kg			05/11/22 14:56	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-9 0.5'

Lab Sample ID: 880-14445-21

Date Collected: 05/03/22 14:55

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 04:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 04:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 04:25	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/13/22 04:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/13/22 04:25	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/10/22 14:04	05/13/22 04:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	05/10/22 14:04	05/13/22 04:25	1
1,4-Difluorobenzene (Surr)	101		70 - 130	05/10/22 14:04	05/13/22 04:25	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 05:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 05:05	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 05:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	101		70 - 130	05/06/22 14:38	05/08/22 05:05	1
o-Terphenyl (Surr)	102		70 - 130	05/06/22 14:38	05/08/22 05:05	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	261		4.99	mg/Kg			05/11/22 15:21	1

Client Sample ID: S-9 1.0'

Lab Sample ID: 880-14445-22

Date Collected: 05/03/22 14:56

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 04:52	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 04:52	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 04:52	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/13/22 04:52	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/10/22 14:04	05/13/22 04:52	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/10/22 14:04	05/13/22 04:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	05/10/22 14:04	05/13/22 04:52	1
1,4-Difluorobenzene (Surr)	107		70 - 130	05/10/22 14:04	05/13/22 04:52	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-9 1.0'

Lab Sample ID: 880-14445-22

Date Collected: 05/03/22 14:56

Matrix: Solid

Date Received: 05/05/22 09:12

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 05:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 05:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/08/22 05:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	95		70 - 130			05/06/22 14:38	05/08/22 05:25	1
o-Terphenyl (Surr)	99		70 - 130			05/06/22 14:38	05/08/22 05:25	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48.6		5.00	mg/Kg			05/11/22 15:29	1

Client Sample ID: S-3 15.0'

Lab Sample ID: 880-14445-23

Date Collected: 05/03/22 12:50

Matrix: Solid

Date Received: 05/05/22 09:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/11/22 09:22	05/13/22 15:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/11/22 09:22	05/13/22 15:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/11/22 09:22	05/13/22 15:46	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		05/11/22 09:22	05/13/22 15:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/11/22 09:22	05/13/22 15:46	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/11/22 09:22	05/13/22 15:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130			05/11/22 09:22	05/13/22 15:46	1
1,4-Difluorobenzene (Surr)	100		70 - 130			05/11/22 09:22	05/13/22 15:46	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/13/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/09/22 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/09/22 08:51	05/09/22 19:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/09/22 08:51	05/09/22 19:37	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-3 15.0'

Lab Sample ID: 880-14445-23

Date Collected: 05/03/22 12:50

Matrix: Solid

Date Received: 05/05/22 09:12

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/09/22 08:51	05/09/22 19:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	99		70 - 130	05/09/22 08:51	05/09/22 19:37	1
o-Terphenyl (Surr)	103		70 - 130	05/09/22 08:51	05/09/22 19:37	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.1		5.00	mg/Kg			05/11/22 15:37	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
880-14445-1	S-1 1.0'	106	99
880-14445-2	S-1 3.0'	106	98
880-14445-3	S-1 5.0'	103	95
880-14445-3 MS	S-1 5.0'	101	100
880-14445-3 MSD	S-1 5.0'	103	95
880-14445-4	S-1 10'	100	100
880-14445-5	S-2 1.0'	112	104
880-14445-6	S-2 3.0'	98	100
880-14445-7	S-2 5.0'	99	96
880-14445-8	S-2 10'	99	96
880-14445-9	S-3 1.0'	104	106
880-14445-10	S-3 3.0'	99	106
880-14445-11	S-3 5.0'	99	104
880-14445-12	S-3 10'	100	96
880-14445-13	S-4 1.0'	99	103
880-14445-14	S-4 3.0'	100	105
880-14445-15	S-4 5.0'	111	99
880-14445-16	S-4 10'	108	103
880-14445-17	S-7 1.0'	100	93
880-14445-18	S-7 3.0'	101	103
880-14445-19	S-7 5.0'	98	103
880-14445-20	S-7 10'	101	92
880-14445-21	S-9 0.5'	112	101
880-14445-22	S-9 1.0'	106	107
880-14445-23	S-3 15.0'	114	100
880-14445-23 MS	S-3 15.0'	104	99
880-14445-23 MSD	S-3 15.0'	104	100
890-2271-A-51-F MS	Matrix Spike	114	98
890-2271-A-51-G MSD	Matrix Spike Duplicate	111	102
LCS 880-25282/1-A	Lab Control Sample	95	100
LCS 880-25311/1-A	Lab Control Sample	104	96
LCS 880-25410/1-A	Lab Control Sample	106	99
LCSD 880-25282/2-A	Lab Control Sample Dup	96	95
LCSD 880-25311/2-A	Lab Control Sample Dup	106	100
LCSD 880-25410/2-A	Lab Control Sample Dup	105	98
MB 880-25282/5-A	Method Blank	74	94
MB 880-25311/5-A	Method Blank	98	96
MB 880-25410/5-A	Method Blank	99	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
880-14397-A-11-E MS	Matrix Spike	102	95

Eurofins Midland

Surrogate Summary

Client: Larson & Associates, Inc.

Job ID: 880-14445-1

Project/Site: Maelstrom

SDG: 22-0105-02

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)
Matrix: Solid
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-14397-A-11-F MSD	Matrix Spike Duplicate	96	90
880-14445-1	S-1 1.0'	114	124
880-14445-2	S-1 3.0'	104	114
880-14445-3	S-1 5.0'	100	108
880-14445-4	S-1 10'	103	111
880-14445-5	S-2 1.0'	95	104
880-14445-6	S-2 3.0'	106	114
880-14445-7	S-2 5.0'	95	100
880-14445-8	S-2 10'	104	109
880-14445-9	S-3 1.0'	103	111
880-14445-10	S-3 3.0'	106	115
880-14445-11	S-3 5.0'	110	118
880-14445-12	S-3 10'	102	109
880-14445-13	S-4 1.0'	95	99
880-14445-14	S-4 3.0'	95	102
880-14445-15	S-4 5.0'	116	125
880-14445-16	S-4 10'	100	110
880-14445-17	S-7 1.0'	121	134 S1+
880-14445-18	S-7 3.0'	117	128
880-14445-19	S-7 5.0'	116	125
880-14445-20	S-7 10'	106	117
880-14445-21	S-9 0.5'	101	102
880-14445-22	S-9 1.0'	95	99
880-14445-23	S-3 15.0'	99	103
880-14491-A-1-C MS	Matrix Spike	96	85
880-14491-A-1-D MSD	Matrix Spike Duplicate	99	87
890-2276-A-1-D MS	Matrix Spike	89	86
890-2276-A-1-E MSD	Matrix Spike Duplicate	89	84
LCS 880-24946/2-A	Lab Control Sample	114	123
LCS 880-24992/2-A	Lab Control Sample	102	107
LCS 880-25059/2-A	Lab Control Sample	118	106
LCSD 880-24946/3-A	Lab Control Sample Dup	136 S1+	145 S1+
LCSD 880-24992/3-A	Lab Control Sample Dup	108	114
LCSD 880-25059/3-A	Lab Control Sample Dup	137 S1+	120
MB 880-24946/1-A	Method Blank	120	141 S1+
MB 880-24992/1-A	Method Blank	101	115
MB 880-25059/1-A	Method Blank	95	96

Surrogate Legend

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25282/5-A

Matrix: Solid

Analysis Batch: 25443

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25282

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 18:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 18:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 18:45	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		05/10/22 14:04	05/12/22 18:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/22 14:04	05/12/22 18:45	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/10/22 14:04	05/12/22 18:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130	05/10/22 14:04	05/12/22 18:45	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/10/22 14:04	05/12/22 18:45	1

Lab Sample ID: LCS 880-25282/1-A

Matrix: Solid

Analysis Batch: 25443

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25282

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09129		mg/Kg		91	70 - 130
Toluene	0.100	0.09371		mg/Kg		94	70 - 130
Ethylbenzene	0.100	0.09313		mg/Kg		93	70 - 130
m,p-Xylenes	0.200	0.1894		mg/Kg		95	70 - 130
o-Xylene	0.100	0.09220		mg/Kg		92	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-25282/2-A

Matrix: Solid

Analysis Batch: 25443

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25282

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09394		mg/Kg		94	70 - 130	3	35
Toluene	0.100	0.09801		mg/Kg		98	70 - 130	4	35
Ethylbenzene	0.100	0.09585		mg/Kg		96	70 - 130	3	35
m,p-Xylenes	0.200	0.1944		mg/Kg		97	70 - 130	3	35
o-Xylene	0.100	0.09517		mg/Kg		95	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 880-14445-3 MS

Matrix: Solid

Analysis Batch: 25443

Client Sample ID: S-1 5.0'

Prep Type: Total/NA

Prep Batch: 25282

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.07795		mg/Kg		78	70 - 130
Toluene	<0.00200	U	0.100	0.08214		mg/Kg		82	70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

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

Lab Sample ID: 880-14445-3 MS

Matrix: Solid

Analysis Batch: 25443

Client Sample ID: S-1 5.0'

Prep Type: Total/NA

Prep Batch: 25282

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.08044		mg/Kg		80	70 - 130
m,p-Xylenes	<0.00399	U	0.200	0.1632		mg/Kg		81	70 - 130
o-Xylene	<0.00200	U	0.100	0.08078		mg/Kg		81	70 - 130

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

Lab Sample ID: 880-14445-3 MSD

Matrix: Solid

Analysis Batch: 25443

Client Sample ID: S-1 5.0'

Prep Type: Total/NA

Prep Batch: 25282

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	<0.00200	U	0.0998	0.08707		mg/Kg		87	70 - 130	11	35
Toluene	<0.00200	U	0.0998	0.09137		mg/Kg		92	70 - 130	11	35
Ethylbenzene	<0.00200	U	0.0998	0.08852		mg/Kg		89	70 - 130	10	35
m,p-Xylenes	<0.00399	U	0.200	0.1814		mg/Kg		91	70 - 130	11	35
o-Xylene	<0.00200	U	0.0998	0.08952		mg/Kg		90	70 - 130	10	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: MB 880-25311/5-A

Matrix: Solid

Analysis Batch: 25520

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25311

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/11/22 09:22	05/13/22 15:17	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/11/22 09:22	05/13/22 15:17	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/11/22 09:22	05/13/22 15:17	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		05/11/22 09:22	05/13/22 15:17	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/11/22 09:22	05/13/22 15:17	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/11/22 09:22	05/13/22 15:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	05/11/22 09:22	05/13/22 15:17	1
1,4-Difluorobenzene (Surr)	96		70 - 130	05/11/22 09:22	05/13/22 15:17	1

Lab Sample ID: LCS 880-25311/1-A

Matrix: Solid

Analysis Batch: 25520

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25311

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08465		mg/Kg		85	70 - 130
Toluene	0.100	0.09009		mg/Kg		90	70 - 130
Ethylbenzene	0.100	0.09303		mg/Kg		93	70 - 130
m,p-Xylenes	0.200	0.1949		mg/Kg		97	70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

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

Lab Sample ID: LCS 880-25311/1-A

Matrix: Solid

Analysis Batch: 25520

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25311

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	0.100	0.1067		mg/Kg		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: LCSD 880-25311/2-A

Matrix: Solid

Analysis Batch: 25520

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25311

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.09626		mg/Kg		96	70 - 130	13	35
Toluene	0.100	0.09379		mg/Kg		94	70 - 130	4	35
Ethylbenzene	0.100	0.09653		mg/Kg		97	70 - 130	4	35
m,p-Xylenes	0.200	0.2012		mg/Kg		101	70 - 130	3	35
o-Xylene	0.100	0.1094		mg/Kg		109	70 - 130	2	35

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

Lab Sample ID: 880-14445-23 MS

Matrix: Solid

Analysis Batch: 25520

Client Sample ID: S-3 15.0'

Prep Type: Total/NA

Prep Batch: 25311

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.07931		mg/Kg		79	70 - 130
Toluene	<0.00200	U	0.100	0.07801		mg/Kg		77	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.07926		mg/Kg		79	70 - 130
m,p-Xylenes	<0.00399	U	0.200	0.1656		mg/Kg		83	70 - 130
o-Xylene	<0.00200	U	0.100	0.09082		mg/Kg		91	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 880-14445-23 MSD

Matrix: Solid

Analysis Batch: 25520

Client Sample ID: S-3 15.0'

Prep Type: Total/NA

Prep Batch: 25311

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	<0.00200	U	0.101	0.08242		mg/Kg		82	70 - 130	4	35
Toluene	<0.00200	U	0.101	0.08070		mg/Kg		79	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.101	0.08232		mg/Kg		81	70 - 130	4	35
m,p-Xylenes	<0.00399	U	0.202	0.1710		mg/Kg		85	70 - 130	3	35
o-Xylene	<0.00200	U	0.101	0.09360		mg/Kg		93	70 - 130	3	35

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

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

Lab Sample ID: 880-14445-23 MSD

Matrix: Solid

Analysis Batch: 25520

Client Sample ID: S-3 15.0'

Prep Type: Total/NA

Prep Batch: 25311

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

Lab Sample ID: MB 880-25410/5-A

Matrix: Solid

Analysis Batch: 25413

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25410

Analyte	MB	MB							
	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/12/22 10:53	05/12/22 15:39	1	
Toluene	<0.00200	U	0.00200	mg/Kg		05/12/22 10:53	05/12/22 15:39	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/12/22 10:53	05/12/22 15:39	1	
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		05/12/22 10:53	05/12/22 15:39	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/12/22 10:53	05/12/22 15:39	1	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/12/22 10:53	05/12/22 15:39	1	

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil	Fac		
4-Bromofluorobenzene (Surr)	99		70 - 130	05/12/22 10:53	05/12/22 15:39	1			
1,4-Difluorobenzene (Surr)	97		70 - 130	05/12/22 10:53	05/12/22 15:39	1			

Lab Sample ID: LCS 880-25410/1-A

Matrix: Solid

Analysis Batch: 25413

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25410

Analyte	Spike	LCS	LCS						
	Added	Result	Qualifier	Unit	D	%Rec	%Rec	Limits	
Benzene	0.100	0.09746		mg/Kg		97		70 - 130	
Toluene	0.100	0.09527		mg/Kg		95		70 - 130	
Ethylbenzene	0.100	0.09824		mg/Kg		98		70 - 130	
m,p-Xylenes	0.200	0.2028		mg/Kg		101		70 - 130	
o-Xylene	0.100	0.1101		mg/Kg		110		70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: LCSD 880-25410/2-A

Matrix: Solid

Analysis Batch: 25413

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25410

Analyte	Spike	LCSD	LCSD							
	Added	Result	Qualifier	Unit	D	%Rec	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09068		mg/Kg		91		70 - 130	7	35
Toluene	0.100	0.09342		mg/Kg		93		70 - 130	2	35
Ethylbenzene	0.100	0.09699		mg/Kg		97		70 - 130	1	35
m,p-Xylenes	0.200	0.2022		mg/Kg		101		70 - 130	0	35
o-Xylene	0.100	0.1092		mg/Kg		109		70 - 130	1	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

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

Lab Sample ID: LCSD 880-25410/2-A

Matrix: Solid

Analysis Batch: 25413

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25410

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

Lab Sample ID: 890-2271-A-51-F MS

Matrix: Solid

Analysis Batch: 25413

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 25410

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.0996	0.07938		mg/Kg		80	70 - 130
Toluene	<0.00201	U	0.0996	0.08283		mg/Kg		83	70 - 130
Ethylbenzene	<0.00201	U	0.0996	0.08646		mg/Kg		87	70 - 130
m,p-Xylenes	<0.00402	U	0.199	0.1824		mg/Kg		92	70 - 130
o-Xylene	<0.00201	U	0.0996	0.1002		mg/Kg		101	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 890-2271-A-51-G MSD

Matrix: Solid

Analysis Batch: 25413

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 25410

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	<0.00201	U	0.0998	0.09289		mg/Kg		93	70 - 130	16	35
Toluene	<0.00201	U	0.0998	0.09234		mg/Kg		92	70 - 130	11	35
Ethylbenzene	<0.00201	U	0.0998	0.09471		mg/Kg		95	70 - 130	9	35
m,p-Xylenes	<0.00402	U	0.200	0.1980		mg/Kg		99	70 - 130	8	35
o-Xylene	<0.00201	U	0.0998	0.1077		mg/Kg		108	70 - 130	7	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

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

Lab Sample ID: MB 880-24946/1-A

Matrix: Solid

Analysis Batch: 25017

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24946

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 12:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 12:08	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 08:55	05/07/22 12:08	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane (Surr)	120		70 - 130	05/06/22 08:55	05/07/22 12:08	1		
o-Terphenyl (Surr)	141	S1+	70 - 130	05/06/22 08:55	05/07/22 12:08	1		

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

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

Lab Sample ID: LCS 880-24946/2-A

Matrix: Solid

Analysis Batch: 25017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 24946

Analyte			Spike	LCS	LCS	Unit	D	%Rec	%Rec		
			Added	Result	Qualifier			Limits			
Gasoline Range Organics (GRO)-C6-C10			1000	1181		mg/Kg		118	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1078		mg/Kg		108	70 - 130		
Surrogate	LCS	LCS									
	%Recovery	Qualifier	Limits								
1-Chlorooctane (Surr)	114		70 - 130								
o-Terphenyl (Surr)	123		70 - 130								

Lab Sample ID: LCSD 880-24946/3-A

Matrix: Solid

Analysis Batch: 25017

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 24946

			Spike	LCSD	LCSD				%Rec	RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1303		mg/Kg		130	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1203		mg/Kg		120	70 - 130	11	20
		LCSD	LCSD								
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane (Surr)	136	S1+	70 - 130								
o-Terphenyl (Surr)	145	S1+	70 - 130								

Lab Sample ID: 880-14397-A-11-E MS

Matrix: Solid

Analysis Batch: 25017

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 24946

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1147		mg/Kg		115	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	996.2		mg/Kg		100	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane (Surr)	102		70 - 130						
o-Terphenyl (Surr)	95		70 - 130						

Lab Sample ID: 880-14397-A-11-F MSD

Matrix: Solid

Analysis Batch: 25017

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 24946

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1137		mg/Kg		114	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	868.4		mg/Kg		87	70 - 130	14	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane (Surr)	96		70 - 130								

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

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

Lab Sample ID: 880-14397-A-11-F MSD

Matrix: Solid

Analysis Batch: 25017

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 24946

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	90		70 - 130

Lab Sample ID: MB 880-24992/1-A

Matrix: Solid

Analysis Batch: 25017

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24992

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/07/22 21:59	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/07/22 21:59	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/22 14:38	05/07/22 21:59	1	
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane (Surr)	101		70 - 130			05/06/22 14:38	05/07/22 21:59	1	
<i>o</i> -Terphenyl (Surr)	115		70 - 130			05/06/22 14:38	05/07/22 21:59	1	

Lab Sample ID: LCS 880-24992/2-A

Matrix: Solid

Analysis Batch: 25017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 24992

			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10			1000	1095		mg/Kg		109	70 - 130	
Diesel Range Organics (Over C10-C28)			1000	926.5		mg/Kg		93	70 - 130	
Surrogate	LCS	LCS								
	%Recovery	Qualifier	Limits							
1-Chlorooctane (Surr)	102		70 - 130							
<i>o</i> -Terphenyl (Surr)	107		70 - 130							

Lab Sample ID: LCSD 880-24992/3-A

Matrix: Solid

Analysis Batch: 25017

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 24992

			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1087		mg/Kg		109	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	918.9		mg/Kg		92	70 - 130	1	20
Surrogate	LCSD	LCSD									
	%Recovery	Qualifier	Limits								
1-Chlorooctane (Surr)	108		70 - 130								
<i>o</i> -Terphenyl (Surr)	114		70 - 130								

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

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

Lab Sample ID: 890-2276-A-1-D MS

Matrix: Solid

Analysis Batch: 25017

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 24992

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1038		mg/Kg		104	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	780.9		mg/Kg		78	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane (Surr)	89		70 - 130						
o-Terphenyl (Surr)	86		70 - 130						

Lab Sample ID: 890-2276-A-1-E MSD

Matrix: Solid

Analysis Batch: 25017

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 24992

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1044		mg/Kg		105	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	768.4		mg/Kg		77	70 - 130	2	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane (Surr)	89		70 - 130								
o-Terphenyl (Surr)	84		70 - 130								

Lab Sample ID: MB 880-25059/1-A

Matrix: Solid

Analysis Batch: 25068

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25059

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/09/22 08:51	05/09/22 11:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/09/22 08:51	05/09/22 11:29	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/09/22 08:51	05/09/22 11:29	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	95		70 - 130			05/09/22 08:51	05/09/22 11:29	1
o-Terphenyl (Surr)	96		70 - 130			05/09/22 08:51	05/09/22 11:29	1

Lab Sample ID: LCS 880-25059/2-A

Matrix: Solid

Analysis Batch: 25068

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25059

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	951.9		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1188		mg/Kg		119	70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

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

Lab Sample ID: LCS 880-25059/2-A

Matrix: Solid

Analysis Batch: 25068

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25059

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane (Surr)	118		70 - 130
o-Terphenyl (Surr)	106		70 - 130

Lab Sample ID: LCSD 880-25059/3-A

Matrix: Solid

Analysis Batch: 25068

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25059

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1119		mg/Kg		112	70 - 130	16	20
Diesel Range Organics (Over C10-C28)	1000	1290		mg/Kg		129	70 - 130	8	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane (Surr)	137	S1+	70 - 130
o-Terphenyl (Surr)	120		70 - 130

Lab Sample ID: 880-14491-A-1-C MS

Matrix: Solid

Analysis Batch: 25068

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 25059

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	923.6		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	917.3		mg/Kg		92	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane (Surr)	96		70 - 130
o-Terphenyl (Surr)	85		70 - 130

Lab Sample ID: 880-14491-A-1-D MSD

Matrix: Solid

Analysis Batch: 25068

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 25059

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	923.6		mg/Kg		93	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	948.4		mg/Kg		95	70 - 130	3	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane (Surr)	99		70 - 130
o-Terphenyl (Surr)	87		70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-24904/1-A

Matrix: Solid

Analysis Batch: 25285

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/10/22 23:45	1

Lab Sample ID: LCS 880-24904/2-A

Matrix: Solid

Analysis Batch: 25285

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	263.1		mg/Kg		105	90 - 110

Lab Sample ID: LCSD 880-24904/3-A

Matrix: Solid

Analysis Batch: 25285

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	262.5		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 880-14445-6 MS

Matrix: Solid

Analysis Batch: 25285

Client Sample ID: S-2 3.0'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1040		252	1246	4	mg/Kg		80	90 - 110

Lab Sample ID: 880-14445-6 MSD

Matrix: Solid

Analysis Batch: 25285

Client Sample ID: S-2 3.0'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1040		252	1250	4	mg/Kg		82	90 - 110	0	20

Lab Sample ID: MB 880-24921/1-A

Matrix: Solid

Analysis Batch: 25286

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/11/22 13:42	1

Lab Sample ID: LCS 880-24921/2-A

Matrix: Solid

Analysis Batch: 25286

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	272.1		mg/Kg		109	90 - 110

Lab Sample ID: LCSD 880-24921/3-A

Matrix: Solid

Analysis Batch: 25286

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	271.5		mg/Kg		109	90 - 110	0	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-14445-16 MS

Matrix: Solid

Analysis Batch: 25286

Client Sample ID: S-4 10'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	35.0		250	279.0		mg/Kg		98	90 - 110

Lab Sample ID: 880-14445-16 MSD

Matrix: Solid

Analysis Batch: 25286

Client Sample ID: S-4 10'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	35.0		250	278.6		mg/Kg		98	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

GC VOA

Prep Batch: 25282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-3	S-1 5.0'	Total/NA	Solid	5035	
880-14445-4	S-1 10'	Total/NA	Solid	5035	
880-14445-5	S-2 1.0'	Total/NA	Solid	5035	
880-14445-6	S-2 3.0'	Total/NA	Solid	5035	
880-14445-7	S-2 5.0'	Total/NA	Solid	5035	
880-14445-8	S-2 10'	Total/NA	Solid	5035	
880-14445-9	S-3 1.0'	Total/NA	Solid	5035	
880-14445-10	S-3 3.0'	Total/NA	Solid	5035	
880-14445-11	S-3 5.0'	Total/NA	Solid	5035	
880-14445-12	S-3 10'	Total/NA	Solid	5035	
880-14445-13	S-4 1.0'	Total/NA	Solid	5035	
880-14445-14	S-4 3.0'	Total/NA	Solid	5035	
880-14445-15	S-4 5.0'	Total/NA	Solid	5035	
880-14445-16	S-4 10'	Total/NA	Solid	5035	
880-14445-17	S-7 1.0'	Total/NA	Solid	5035	
880-14445-18	S-7 3.0'	Total/NA	Solid	5035	
880-14445-19	S-7 5.0'	Total/NA	Solid	5035	
880-14445-20	S-7 10'	Total/NA	Solid	5035	
880-14445-21	S-9 0.5'	Total/NA	Solid	5035	
880-14445-22	S-9 1.0'	Total/NA	Solid	5035	
MB 880-25282/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25282/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25282/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-14445-3 MS	S-1 5.0'	Total/NA	Solid	5035	
880-14445-3 MSD	S-1 5.0'	Total/NA	Solid	5035	

Prep Batch: 25311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-23	S-3 15.0'	Total/NA	Solid	5035	
MB 880-25311/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25311/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25311/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-14445-23 MS	S-3 15.0'	Total/NA	Solid	5035	
880-14445-23 MSD	S-3 15.0'	Total/NA	Solid	5035	

Prep Batch: 25410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-1	S-1 1.0'	Total/NA	Solid	5035	
880-14445-2	S-1 3.0'	Total/NA	Solid	5035	
MB 880-25410/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25410/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25410/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2271-A-51-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2271-A-51-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 25413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-1	S-1 1.0'	Total/NA	Solid	8021B	25410
880-14445-2	S-1 3.0'	Total/NA	Solid	8021B	25410
MB 880-25410/5-A	Method Blank	Total/NA	Solid	8021B	25410
LCS 880-25410/1-A	Lab Control Sample	Total/NA	Solid	8021B	25410

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QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

GC VOA (Continued)

Analysis Batch: 25413 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-25410/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25410
890-2271-A-51-F MS	Matrix Spike	Total/NA	Solid	8021B	25410
890-2271-A-51-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	25410

Analysis Batch: 25443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-3	S-1 5.0'	Total/NA	Solid	8021B	25282
880-14445-4	S-1 10'	Total/NA	Solid	8021B	25282
880-14445-5	S-2 1.0'	Total/NA	Solid	8021B	25282
880-14445-6	S-2 3.0'	Total/NA	Solid	8021B	25282
880-14445-7	S-2 5.0'	Total/NA	Solid	8021B	25282
880-14445-8	S-2 10'	Total/NA	Solid	8021B	25282
880-14445-9	S-3 1.0'	Total/NA	Solid	8021B	25282
880-14445-10	S-3 3.0'	Total/NA	Solid	8021B	25282
880-14445-11	S-3 5.0'	Total/NA	Solid	8021B	25282
880-14445-12	S-3 10'	Total/NA	Solid	8021B	25282
880-14445-13	S-4 1.0'	Total/NA	Solid	8021B	25282
880-14445-14	S-4 3.0'	Total/NA	Solid	8021B	25282
880-14445-15	S-4 5.0'	Total/NA	Solid	8021B	25282
880-14445-16	S-4 10'	Total/NA	Solid	8021B	25282
880-14445-17	S-7 1.0'	Total/NA	Solid	8021B	25282
880-14445-18	S-7 3.0'	Total/NA	Solid	8021B	25282
880-14445-19	S-7 5.0'	Total/NA	Solid	8021B	25282
880-14445-20	S-7 10'	Total/NA	Solid	8021B	25282
880-14445-21	S-9 0.5'	Total/NA	Solid	8021B	25282
880-14445-22	S-9 1.0'	Total/NA	Solid	8021B	25282
MB 880-25282/5-A	Method Blank	Total/NA	Solid	8021B	25282
LCS 880-25282/1-A	Lab Control Sample	Total/NA	Solid	8021B	25282
LCSD 880-25282/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25282
880-14445-3 MS	S-1 5.0'	Total/NA	Solid	8021B	25282
880-14445-3 MSD	S-1 5.0'	Total/NA	Solid	8021B	25282

Analysis Batch: 25505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-1	S-1 1.0'	Total/NA	Solid	Total BTEX	
880-14445-2	S-1 3.0'	Total/NA	Solid	Total BTEX	
880-14445-3	S-1 5.0'	Total/NA	Solid	Total BTEX	
880-14445-4	S-1 10'	Total/NA	Solid	Total BTEX	
880-14445-5	S-2 1.0'	Total/NA	Solid	Total BTEX	
880-14445-6	S-2 3.0'	Total/NA	Solid	Total BTEX	
880-14445-7	S-2 5.0'	Total/NA	Solid	Total BTEX	
880-14445-8	S-2 10'	Total/NA	Solid	Total BTEX	
880-14445-9	S-3 1.0'	Total/NA	Solid	Total BTEX	
880-14445-10	S-3 3.0'	Total/NA	Solid	Total BTEX	
880-14445-11	S-3 5.0'	Total/NA	Solid	Total BTEX	
880-14445-12	S-3 10'	Total/NA	Solid	Total BTEX	
880-14445-13	S-4 1.0'	Total/NA	Solid	Total BTEX	
880-14445-14	S-4 3.0'	Total/NA	Solid	Total BTEX	
880-14445-15	S-4 5.0'	Total/NA	Solid	Total BTEX	
880-14445-16	S-4 10'	Total/NA	Solid	Total BTEX	
880-14445-17	S-7 1.0'	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

GC VOA (Continued)

Analysis Batch: 25505 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-18	S-7 3.0'	Total/NA	Solid	Total BTEX	
880-14445-19	S-7 5.0'	Total/NA	Solid	Total BTEX	
880-14445-20	S-7 10'	Total/NA	Solid	Total BTEX	
880-14445-21	S-9 0.5'	Total/NA	Solid	Total BTEX	
880-14445-22	S-9 1.0'	Total/NA	Solid	Total BTEX	
880-14445-23	S-3 15.0'	Total/NA	Solid	Total BTEX	

Analysis Batch: 25520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-23	S-3 15.0'	Total/NA	Solid	8021B	25311
MB 880-25311/5-A	Method Blank	Total/NA	Solid	8021B	25311
LCS 880-25311/1-A	Lab Control Sample	Total/NA	Solid	8021B	25311
LCSD 880-25311/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25311
880-14445-23 MS	S-3 15.0'	Total/NA	Solid	8021B	25311
880-14445-23 MSD	S-3 15.0'	Total/NA	Solid	8021B	25311

GC Semi VOA

Prep Batch: 24946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-1	S-1 1.0'	Total/NA	Solid	8015NM Prep	
880-14445-2	S-1 3.0'	Total/NA	Solid	8015NM Prep	
880-14445-3	S-1 5.0'	Total/NA	Solid	8015NM Prep	
880-14445-4	S-1 10'	Total/NA	Solid	8015NM Prep	
880-14445-5	S-2 1.0'	Total/NA	Solid	8015NM Prep	
880-14445-6	S-2 3.0'	Total/NA	Solid	8015NM Prep	
880-14445-7	S-2 5.0'	Total/NA	Solid	8015NM Prep	
880-14445-8	S-2 10'	Total/NA	Solid	8015NM Prep	
880-14445-9	S-3 1.0'	Total/NA	Solid	8015NM Prep	
880-14445-10	S-3 3.0'	Total/NA	Solid	8015NM Prep	
880-14445-11	S-3 5.0'	Total/NA	Solid	8015NM Prep	
880-14445-12	S-3 10'	Total/NA	Solid	8015NM Prep	
880-14445-13	S-4 1.0'	Total/NA	Solid	8015NM Prep	
MB 880-24946/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-24946/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-24946/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-14397-A-11-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-14397-A-11-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 24992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-14	S-4 3.0'	Total/NA	Solid	8015NM Prep	
880-14445-15	S-4 5.0'	Total/NA	Solid	8015NM Prep	
880-14445-16	S-4 10'	Total/NA	Solid	8015NM Prep	
880-14445-17	S-7 1.0'	Total/NA	Solid	8015NM Prep	
880-14445-18	S-7 3.0'	Total/NA	Solid	8015NM Prep	
880-14445-19	S-7 5.0'	Total/NA	Solid	8015NM Prep	
880-14445-20	S-7 10'	Total/NA	Solid	8015NM Prep	
880-14445-21	S-9 0.5'	Total/NA	Solid	8015NM Prep	
880-14445-22	S-9 1.0'	Total/NA	Solid	8015NM Prep	
MB 880-24992/1-A	Method Blank	Total/NA	Solid	8015NM Prep	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

GC Semi VOA (Continued)

Prep Batch: 24992 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-24992/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-24992/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2276-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2276-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-1	S-1 1.0'	Total/NA	Solid	8015B NM	24946
880-14445-2	S-1 3.0'	Total/NA	Solid	8015B NM	24946
880-14445-3	S-1 5.0'	Total/NA	Solid	8015B NM	24946
880-14445-4	S-1 10'	Total/NA	Solid	8015B NM	24946
880-14445-5	S-2 1.0'	Total/NA	Solid	8015B NM	24946
880-14445-6	S-2 3.0'	Total/NA	Solid	8015B NM	24946
880-14445-7	S-2 5.0'	Total/NA	Solid	8015B NM	24946
880-14445-8	S-2 10'	Total/NA	Solid	8015B NM	24946
880-14445-9	S-3 1.0'	Total/NA	Solid	8015B NM	24946
880-14445-10	S-3 3.0'	Total/NA	Solid	8015B NM	24946
880-14445-11	S-3 5.0'	Total/NA	Solid	8015B NM	24946
880-14445-12	S-3 10'	Total/NA	Solid	8015B NM	24946
880-14445-13	S-4 1.0'	Total/NA	Solid	8015B NM	24946
880-14445-14	S-4 3.0'	Total/NA	Solid	8015B NM	24992
880-14445-15	S-4 5.0'	Total/NA	Solid	8015B NM	24992
880-14445-16	S-4 10'	Total/NA	Solid	8015B NM	24992
880-14445-17	S-7 1.0'	Total/NA	Solid	8015B NM	24992
880-14445-18	S-7 3.0'	Total/NA	Solid	8015B NM	24992
880-14445-19	S-7 5.0'	Total/NA	Solid	8015B NM	24992
880-14445-20	S-7 10'	Total/NA	Solid	8015B NM	24992
880-14445-21	S-9 0.5'	Total/NA	Solid	8015B NM	24992
880-14445-22	S-9 1.0'	Total/NA	Solid	8015B NM	24992
MB 880-24946/1-A	Method Blank	Total/NA	Solid	8015B NM	24946
MB 880-24992/1-A	Method Blank	Total/NA	Solid	8015B NM	24992
LCS 880-24946/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	24946
LCS 880-24992/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	24992
LCSD 880-24946/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	24946
LCSD 880-24992/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	24992
880-14397-A-11-E MS	Matrix Spike	Total/NA	Solid	8015B NM	24946
880-14397-A-11-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	24946
890-2276-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	24992
890-2276-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	24992

Prep Batch: 25059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-23	S-3 15.0'	Total/NA	Solid	8015NM Prep	
MB 880-25059/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25059/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25059/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-14491-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-14491-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

GC Semi VOA

Analysis Batch: 25068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-23	S-3 15.0'	Total/NA	Solid	8015B NM	25059
MB 880-25059/1-A	Method Blank	Total/NA	Solid	8015B NM	25059
LCS 880-25059/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	25059
LCSD 880-25059/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	25059
880-14491-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	25059
880-14491-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	25059

Analysis Batch: 25093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-1	S-1 1.0'	Total/NA	Solid	8015 NM	
880-14445-2	S-1 3.0'	Total/NA	Solid	8015 NM	
880-14445-3	S-1 5.0'	Total/NA	Solid	8015 NM	
880-14445-4	S-1 10'	Total/NA	Solid	8015 NM	
880-14445-5	S-2 1.0'	Total/NA	Solid	8015 NM	
880-14445-6	S-2 3.0'	Total/NA	Solid	8015 NM	
880-14445-7	S-2 5.0'	Total/NA	Solid	8015 NM	
880-14445-8	S-2 10'	Total/NA	Solid	8015 NM	
880-14445-9	S-3 1.0'	Total/NA	Solid	8015 NM	
880-14445-10	S-3 3.0'	Total/NA	Solid	8015 NM	
880-14445-11	S-3 5.0'	Total/NA	Solid	8015 NM	
880-14445-12	S-3 10'	Total/NA	Solid	8015 NM	
880-14445-13	S-4 1.0'	Total/NA	Solid	8015 NM	
880-14445-14	S-4 3.0'	Total/NA	Solid	8015 NM	
880-14445-15	S-4 5.0'	Total/NA	Solid	8015 NM	
880-14445-16	S-4 10'	Total/NA	Solid	8015 NM	
880-14445-17	S-7 1.0'	Total/NA	Solid	8015 NM	
880-14445-18	S-7 3.0'	Total/NA	Solid	8015 NM	
880-14445-19	S-7 5.0'	Total/NA	Solid	8015 NM	
880-14445-20	S-7 10'	Total/NA	Solid	8015 NM	
880-14445-21	S-9 0.5'	Total/NA	Solid	8015 NM	
880-14445-22	S-9 1.0'	Total/NA	Solid	8015 NM	
880-14445-23	S-3 15.0'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 24904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-1	S-1 1.0'	Soluble	Solid	DI Leach	
880-14445-2	S-1 3.0'	Soluble	Solid	DI Leach	
880-14445-3	S-1 5.0'	Soluble	Solid	DI Leach	
880-14445-4	S-1 10'	Soluble	Solid	DI Leach	
880-14445-5	S-2 1.0'	Soluble	Solid	DI Leach	
880-14445-6	S-2 3.0'	Soluble	Solid	DI Leach	
880-14445-7	S-2 5.0'	Soluble	Solid	DI Leach	
880-14445-8	S-2 10'	Soluble	Solid	DI Leach	
880-14445-9	S-3 1.0'	Soluble	Solid	DI Leach	
880-14445-10	S-3 3.0'	Soluble	Solid	DI Leach	
880-14445-11	S-3 5.0'	Soluble	Solid	DI Leach	
880-14445-12	S-3 10'	Soluble	Solid	DI Leach	
880-14445-13	S-4 1.0'	Soluble	Solid	DI Leach	
880-14445-14	S-4 3.0'	Soluble	Solid	DI Leach	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

HPLC/IC (Continued)

Leach Batch: 24904 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-15	S-4 5.0'	Soluble	Solid	DI Leach	
MB 880-24904/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-24904/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-24904/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-14445-6 MS	S-2 3.0'	Soluble	Solid	DI Leach	
880-14445-6 MSD	S-2 3.0'	Soluble	Solid	DI Leach	

Leach Batch: 24921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-16	S-4 10'	Soluble	Solid	DI Leach	
880-14445-17	S-7 1.0'	Soluble	Solid	DI Leach	
880-14445-18	S-7 3.0'	Soluble	Solid	DI Leach	
880-14445-19	S-7 5.0'	Soluble	Solid	DI Leach	
880-14445-20	S-7 10'	Soluble	Solid	DI Leach	
880-14445-21	S-9 0.5'	Soluble	Solid	DI Leach	
880-14445-22	S-9 1.0'	Soluble	Solid	DI Leach	
880-14445-23	S-3 15.0'	Soluble	Solid	DI Leach	
MB 880-24921/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-24921/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-24921/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-14445-16 MS	S-4 10'	Soluble	Solid	DI Leach	
880-14445-16 MSD	S-4 10'	Soluble	Solid	DI Leach	

Analysis Batch: 25285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-1	S-1 1.0'	Soluble	Solid	300.0	24904
880-14445-2	S-1 3.0'	Soluble	Solid	300.0	24904
880-14445-3	S-1 5.0'	Soluble	Solid	300.0	24904
880-14445-4	S-1 10'	Soluble	Solid	300.0	24904
880-14445-5	S-2 1.0'	Soluble	Solid	300.0	24904
880-14445-6	S-2 3.0'	Soluble	Solid	300.0	24904
880-14445-7	S-2 5.0'	Soluble	Solid	300.0	24904
880-14445-8	S-2 10'	Soluble	Solid	300.0	24904
880-14445-9	S-3 1.0'	Soluble	Solid	300.0	24904
880-14445-10	S-3 3.0'	Soluble	Solid	300.0	24904
880-14445-11	S-3 5.0'	Soluble	Solid	300.0	24904
880-14445-12	S-3 10'	Soluble	Solid	300.0	24904
880-14445-13	S-4 1.0'	Soluble	Solid	300.0	24904
880-14445-14	S-4 3.0'	Soluble	Solid	300.0	24904
880-14445-15	S-4 5.0'	Soluble	Solid	300.0	24904
MB 880-24904/1-A	Method Blank	Soluble	Solid	300.0	24904
LCS 880-24904/2-A	Lab Control Sample	Soluble	Solid	300.0	24904
LCSD 880-24904/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	24904
880-14445-6 MS	S-2 3.0'	Soluble	Solid	300.0	24904
880-14445-6 MSD	S-2 3.0'	Soluble	Solid	300.0	24904

Analysis Batch: 25286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-16	S-4 10'	Soluble	Solid	300.0	24921
880-14445-17	S-7 1.0'	Soluble	Solid	300.0	24921
880-14445-18	S-7 3.0'	Soluble	Solid	300.0	24921

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

HPLC/IC (Continued)

Analysis Batch: 25286 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14445-19	S-7 5.0'	Soluble	Solid	300.0	24921
880-14445-20	S-7 10'	Soluble	Solid	300.0	24921
880-14445-21	S-9 0.5'	Soluble	Solid	300.0	24921
880-14445-22	S-9 1.0'	Soluble	Solid	300.0	24921
880-14445-23	S-3 15.0'	Soluble	Solid	300.0	24921
MB 880-24921/1-A	Method Blank	Soluble	Solid	300.0	24921
LCS 880-24921/2-A	Lab Control Sample	Soluble	Solid	300.0	24921
LCSD 880-24921/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	24921
880-14445-16 MS	S-4 10'	Soluble	Solid	300.0	24921
880-14445-16 MSD	S-4 10'	Soluble	Solid	300.0	24921

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-1 1.0'

Lab Sample ID: 880-14445-1

Date Collected: 05/03/22 14:30

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	25410	05/12/22 10:53	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25413	05/12/22 21:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 16:29	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		10			25285	05/11/22 01:23	CH	XEN MID

Client Sample ID: S-1 3.0'

Lab Sample ID: 880-14445-2

Date Collected: 05/03/22 14:31

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	25410	05/12/22 10:53	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25413	05/12/22 21:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 16:51	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		1			25285	05/11/22 01:31	CH	XEN MID

Client Sample ID: S-1 5.0'

Lab Sample ID: 880-14445-3

Date Collected: 05/03/22 14:32

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/12/22 19:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 17:13	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		1			25285	05/11/22 01:39	CH	XEN MID

Client Sample ID: S-1 10'

Lab Sample ID: 880-14445-4

Date Collected: 05/03/22 14:33

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/12/22 19:37	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-1 10'

Lab Sample ID: 880-14445-4

Date Collected: 05/03/22 14:33

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 17:57	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		1			25285	05/11/22 01:48	CH	XEN MID

Client Sample ID: S-2 1.0'

Lab Sample ID: 880-14445-5

Date Collected: 05/03/22 13:10

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/12/22 20:02	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 18:19	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		10			25285	05/11/22 01:56	CH	XEN MID

Client Sample ID: S-2 3.0'

Lab Sample ID: 880-14445-6

Date Collected: 05/03/22 13:11

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/12/22 20:28	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 18:41	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		1			25285	05/11/22 02:04	CH	XEN MID

Client Sample ID: S-2 5.0'

Lab Sample ID: 880-14445-7

Date Collected: 05/03/22 13:12

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/12/22 20:54	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 19:04	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-2 5.0'

Lab Sample ID: 880-14445-7

Date Collected: 05/03/22 13:12

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		1			25285	05/11/22 02:29	CH	XEN MID

Client Sample ID: S-2 10'

Lab Sample ID: 880-14445-8

Date Collected: 05/03/22 13:13

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/12/22 21:21	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 19:26	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		1			25285	05/11/22 02:37	CH	XEN MID

Client Sample ID: S-3 1.0'

Lab Sample ID: 880-14445-9

Date Collected: 05/03/22 12:40

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/12/22 21:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 19:48	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		10			25285	05/11/22 03:01	CH	XEN MID

Client Sample ID: S-3 3.0'

Lab Sample ID: 880-14445-10

Date Collected: 05/03/22 12:41

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/12/22 22:13	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 20:10	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		1			25285	05/11/22 03:10	CH	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-3 5.0'

Lab Sample ID: 880-14445-11

Date Collected: 05/03/22 12:42

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/12/22 22:40	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 20:31	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		1			25285	05/11/22 03:18	CH	XEN MID

Client Sample ID: S-3 10'

Lab Sample ID: 880-14445-12

Date Collected: 05/03/22 12:43

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/12/22 23:06	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 20:53	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		1			25285	05/11/22 03:26	CH	XEN MID

Client Sample ID: S-4 1.0'

Lab Sample ID: 880-14445-13

Date Collected: 05/03/22 12:20

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/13/22 00:52	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	24946	05/06/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/07/22 21:15	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		10			25285	05/11/22 03:34	CH	XEN MID

Client Sample ID: S-4 3.0'

Lab Sample ID: 880-14445-14

Date Collected: 05/03/22 12:21

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/13/22 01:19	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-4 3.0'

Lab Sample ID: 880-14445-14

Date Collected: 05/03/22 12:21

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	24992	05/06/22 14:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/08/22 02:23	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		1			25285	05/11/22 03:42	CH	XEN MID

Client Sample ID: S-4 5.0'

Lab Sample ID: 880-14445-15

Date Collected: 05/03/22 12:22

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/13/22 01:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	24992	05/06/22 14:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/08/22 02:43	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	24904	05/05/22 13:27	SC	XEN MID
Soluble	Analysis	300.0		1			25285	05/11/22 03:51	CH	XEN MID

Client Sample ID: S-4 10'

Lab Sample ID: 880-14445-16

Date Collected: 05/03/22 12:23

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/13/22 02:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	24992	05/06/22 14:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/08/22 03:23	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	24921	05/05/22 16:04	SC	XEN MID
Soluble	Analysis	300.0		1			25286	05/11/22 14:07	CH	XEN MID

Client Sample ID: S-7 1.0'

Lab Sample ID: 880-14445-17

Date Collected: 05/03/22 15:10

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/13/22 02:38	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	24992	05/06/22 14:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/08/22 03:44	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-7 1.0'

Lab Sample ID: 880-14445-17

Date Collected: 05/03/22 15:10

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	24921	05/05/22 16:04	SC	XEN MID
Soluble	Analysis	300.0		5			25286	05/11/22 14:31	CH	XEN MID

Client Sample ID: S-7 3.0'

Lab Sample ID: 880-14445-18

Date Collected: 05/03/22 15:11

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/13/22 03:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	24992	05/06/22 14:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/08/22 04:04	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	24921	05/05/22 16:04	SC	XEN MID
Soluble	Analysis	300.0		1			25286	05/11/22 14:40	CH	XEN MID

Client Sample ID: S-7 5.0'

Lab Sample ID: 880-14445-19

Date Collected: 05/03/22 15:12

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/13/22 03:32	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	24992	05/06/22 14:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/08/22 04:24	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	24921	05/05/22 16:04	SC	XEN MID
Soluble	Analysis	300.0		1			25286	05/11/22 14:48	CH	XEN MID

Client Sample ID: S-7 10'

Lab Sample ID: 880-14445-20

Date Collected: 05/03/22 15:13

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/13/22 03:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	24992	05/06/22 14:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/08/22 04:44	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	24921	05/05/22 16:04	SC	XEN MID
Soluble	Analysis	300.0		1			25286	05/11/22 14:56	CH	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Client Sample ID: S-9 0.5'

Lab Sample ID: 880-14445-21

Date Collected: 05/03/22 14:55

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/13/22 04:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	24992	05/06/22 14:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/08/22 05:05	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	24921	05/05/22 16:04	SC	XEN MID
Soluble	Analysis	300.0		1			25286	05/11/22 15:21	CH	XEN MID

Client Sample ID: S-9 1.0'

Lab Sample ID: 880-14445-22

Date Collected: 05/03/22 14:56

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25282	05/10/22 14:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25443	05/13/22 04:52	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	24992	05/06/22 14:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25017	05/08/22 05:25	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	24921	05/05/22 16:04	SC	XEN MID
Soluble	Analysis	300.0		1			25286	05/11/22 15:29	CH	XEN MID

Client Sample ID: S-3 15.0'

Lab Sample ID: 880-14445-23

Date Collected: 05/03/22 12:50

Matrix: Solid

Date Received: 05/05/22 09:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25311	05/11/22 09:22	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25520	05/13/22 15:46	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25505	05/13/22 09:16	MR	XEN MID
Total/NA	Analysis	8015 NM		1			25093	05/09/22 12:05	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25059	05/09/22 08:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25068	05/09/22 19:37	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	24921	05/05/22 16:04	SC	XEN MID
Soluble	Analysis	300.0		1			25286	05/11/22 15:37	CH	XEN MID

Laboratory References:

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

Eurofins Midland

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Midland

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Maelstrom

Job ID: 880-14445-1
SDG: 22-0105-02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-14445-1	S-1 1.0'	Solid	05/03/22 14:30	05/05/22 09:12
880-14445-2	S-1 3.0'	Solid	05/03/22 14:31	05/05/22 09:12
880-14445-3	S-1 5.0'	Solid	05/03/22 14:32	05/05/22 09:12
880-14445-4	S-1 10'	Solid	05/03/22 14:33	05/05/22 09:12
880-14445-5	S-2 1.0'	Solid	05/03/22 13:10	05/05/22 09:12
880-14445-6	S-2 3.0'	Solid	05/03/22 13:11	05/05/22 09:12
880-14445-7	S-2 5.0'	Solid	05/03/22 13:12	05/05/22 09:12
880-14445-8	S-2 10'	Solid	05/03/22 13:13	05/05/22 09:12
880-14445-9	S-3 1.0'	Solid	05/03/22 12:40	05/05/22 09:12
880-14445-10	S-3 3.0'	Solid	05/03/22 12:41	05/05/22 09:12
880-14445-11	S-3 5.0'	Solid	05/03/22 12:42	05/05/22 09:12
880-14445-12	S-3 10'	Solid	05/03/22 12:43	05/05/22 09:12
880-14445-13	S-4 1.0'	Solid	05/03/22 12:20	05/05/22 09:12
880-14445-14	S-4 3.0'	Solid	05/03/22 12:21	05/05/22 09:12
880-14445-15	S-4 5.0'	Solid	05/03/22 12:22	05/05/22 09:12
880-14445-16	S-4 10'	Solid	05/03/22 12:23	05/05/22 09:12
880-14445-17	S-7 1.0'	Solid	05/03/22 15:10	05/05/22 09:12
880-14445-18	S-7 3.0'	Solid	05/03/22 15:11	05/05/22 09:12
880-14445-19	S-7 5.0'	Solid	05/03/22 15:12	05/05/22 09:12
880-14445-20	S-7 10'	Solid	05/03/22 15:13	05/05/22 09:12
880-14445-21	S-9 0.5'	Solid	05/03/22 14:55	05/05/22 09:12
880-14445-22	S-9 1.0'	Solid	05/03/22 14:56	05/05/22 09:12
880-14445-23	S-3 15.0'	Solid	05/03/22 12:50	05/05/22 09:12

Varson & Associates, Inc.
Environmental Consultants

507 N Marienfeld Ste 202
Midland TX 79701
432 687 0901

Data Reported to

DATE 5-3-22 PO# 14445 LAB WORK ORDER# 1 PAGE 1 OF 2
PROJECT LOCATION OR NAME Midstream
LAI PROJECT # 22-0105-02 COLLECTOR TP + JR

1 No. 2233
CHAIN-OF-CUSTODY

TRRP report? ☐ Yes ☒ No
TIME ZONE
Time zone/State
MST/NM

S=SOIL
W=WATER
A=AIR
P=PAINT
SL=SLUDGE
OT=OTHER

Field Sample ID	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO ₃	H ₂ SO ₄ ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
-----------------	-------	------	------	--------	-----------------	-----	------------------	---	-----	-------------	----------	-------------

S-1	1.0'	5/3/22	1430	S	1				X		X	X	X	X	
S-1	3.0'	5-3-22	1431												
S-1	5.0'		1432												
S-1	10'		1433												
S-2	1.0'		1310												
S-2	3.0'		1311												
S-2	5.0'		1312												
S-2	10'		1313												
S-3	1.0'		1240												
S-3	3.0'		1241												
S-3	5.0'		1242												
S-3	10'		1243												
S-4	1.0'		1220												
S-4	3.0'		1221												
S-4	5.0'		1222												
TOTAL	15														



880-14445 Chain of Custody

RELINQUISHED BY (Signature) <u>[Signature]</u>	DATE/TIME <u>5/3/22 9.12</u>	RECEIVED BY (Signature) <u>[Signature]</u>	TURN AROUND TIME NORMAL ☒ 1 DAY ☐ 2 DAY ☐ OTHER ☐	LABORATORY USE ONLY: RECEIVING TEMP <u>41.2</u> THERM# <u>14445</u> CUSTODY SEALS - ☒ BROKEN ☒ CONTACT ☒ NOT USED ☒ CARRIER BILL # <u>14445</u> ☒ HAND DELIVERED
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)		
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)		
LABORATORY <u>Varson</u>				

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

No. 2234

CHAIN-OF-CUSTODY

Arson & Associates, Inc.
Environmental Consultants

507 N. Marrenfeld Ste 202
Midland TX 79701
432-687 0901

Date Reported to

DATE 5-5-22 PAGE 2 OF 2
PO# _____ LAB WORK ORDER# _____
PROJECT LOCATION OR NAME Maelstrom
LAI PROJECT # 32-0105-02 COLLECTOR TP+JR

TRRP report?
☐ Yes ☒ No

S=SOIL
W=WATER
A=AIR
P=PAINT
SL=SLUDGE
OT=OTHER

TIME ZONE
Time zone/State
MST/MN

Field
Sample I.D.

Lab #

Date

Time

Matrix

of Containers

PRESERVATION
HCl
HNO₃
H₂SO₄ ☐ NaOH ☐
ICE
UNPRESSERVED

ANALYSES
BTEX ☒ MTBE ☒
TPH 418 ☒ TPH 1005 ☒ TPH 1006 ☒
GASOLINE MOD 8015 ☒
DIESEL MOD 8015 ☒
OIL MOD 8015 ☒
VOC 8260 ☒
SVOC 8270 ☒
8081 PESTICIDES ☒ PAH 8270 ☒ HOLDPAH ☒
8082 PCBs ☒ 8151 HERBICIDES ☒
TCDF - METALS (ROR) ☒ TCDF VOC ☒
TCDF - PEST ☒ HERB ☒ Semi-VOC ☒
TOTAL METALS (RCRA) ☒ OTHER LIST ☒
LEAD - TOTAL ☒ DW 2008 ☒ TCLP ☒
RCI ☒ TOX ☒ FLASHPOINT ☒
TDS ☒ TSS ☒ % MOISTURE ☒ CYANIDE ☒
PH ☒ HEXAVALENT CHROMIUM ☒
EXPLOSIVES ☒ PECTHLORATE ☒
CHLORIDES ☒ ANIONS ☒ ALKALINITY ☒

FIELD NOTES

5-4 10' 1510 5-3-22 1223 S 1
5-7 10' 1511
5-7 30' 1512
5-7 5.0' 1513
5-9 0.5' 1455
5-9 1.0' 1456

Loc: 880
14445

TOTAL 7

RELINQUISHED BY (Signature)
RELINQUISHED BY (Signature)
RELINQUISHED BY (Signature)
LABORATORY Xeno

DATE/TIME
DATE/TIME
DATE/TIME
RECEIVED BY (Signature)
RECEIVED BY (Signature)
RECEIVED BY (Signature)

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 41.2 THERM# IP8-2
CUSTODY SEALS - ☒ BROKEN ☒ INTACT ☐ NOT USED
☒ CARRIER BILL # _____
☒ HAND DELIVERED

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-14445-1

SDG Number: 22-0105-02

Login Number: 14445**List Number: 1****Creator: Rodriguez, Leticia****List Source: Eurofins Midland**

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	

Appendix A
Laboratory Reports

Tracking Number: nAPP2202549943
Delineation Report and Remediation Plan
Maelstrom SWD, Chevron USA, Inc.
Produced Water Release
May 17, 2022



Impacted area captured by Chevron personnel

Tracking Number: nAPP2202549943
Delineation Report and Remediation Plan
Maelstrom SWD, Chevron USA, Inc.
Produced Water Release
May 17, 2022



Impacted area viewing southwest, March 9, 2022



Impacted area viewing southeast, March 9, 2022

Tracking Number: nAPP2202549943
Delineation Report and Remediation Plan
Maelstrom SWD, Chevron USA, Inc.
Produced Water Release
May 17, 2022



Impacted area viewing south, March 9, 2022

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 109919

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 109919
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Remediation Plan Approved with Conditions. The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.	6/1/2022