

Incident ID	nAPP2106659781 &
District RP	nAPP2205652777
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?	<u>>60</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

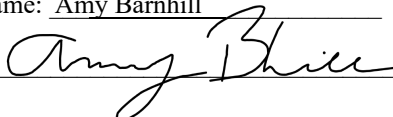
- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile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

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

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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: Lead Environmental Specialist

Signature:  Date: 7-18-22

email: ABarnhill@chevron.com

Telephone: 432-687-7100

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.*

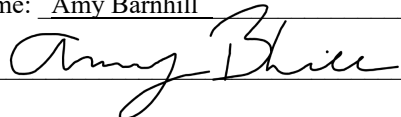
- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note 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: Lead Environmental Specialist

Signature:  Date: 7-18-22

email: ABarnhill@chevron.com Telephone: 432-687-7100

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

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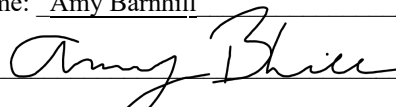
Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Amy Barnhill Title: Lead Environmental Specialist
Signature:  Date: 7-18-22
email: ABarnhill@chevron.com Telephone: 432-687-7100

OCD Only

Received by: _____ Date: _____

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

Closure Approved by:  Date: 07/25/2022
Printed Name: Jennifer Nobui Title: Environmental Specialist A

Tracking Number: nAPP2106659781 and nAPP2205652777

Closure Report

SND 1201 Federal 004 3002H (Sand Dunes)

Condensate Release

Eddy County, New Mexico

Latitude: N 32.22563°

Longitude: W -103.72421°

LAI Project No. 21-0100-17 & 22-0105-06

July 6, 2022

Prepared for:

Chevron USA Inc.

6301 Deauville Blvd.

Midland, Texas 79706

Prepared by:

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Mark J. Larson, P.G.

Certified Professional Geologist #10490



Robert Nelson

Sr. Geoscientist

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Appendix B	Soil Boring Log
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Tracking Number: nAPP2106659781 & nAPP2205652777

Closure Report

SND 1201 Federal 004 3002H, Eddy County, New Mexico

July 6, 2022

1.0 INTRODUCTION

Larson & Associates, Inc. (LAI), has prepared this closure report on behalf of Chevron USA Inc. (Chevron) for submittal to the New Mexico Oil Conservation Division (NMOCD) District II in Artesia, Mexico, for two (2) condensate releases at the Sand Dunes SND 1201 (Site) located in Unit P (SE/4, SE/4), Section 12, Township 24 South, Range 31 East, in Eddy County, New Mexico. The geodetic position is North 32.22563° and West -103.72421°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

The first release was discovered on February 17, 2021 and occurred due to a leak from a valve at the load line. Chevron reported that 16 barrels (bbls) of oil and 48 bbls of produced water were released. No fluid was recovered. The affected area measures approximately 673 square feet. The initial C-141 was submitted to NMOCD District II on March 8, 2021 and assigned incident number nAPP2106659781.

The second release was discovered on February 23, 2022, and when a valve was not closed after the line defrosted causing the line to leak. Chevron reported that 22.5 barrels (bbls) of produced water and 7.5 bbls of condensate were released. Chevron reported that 22.5 bbls of produced water and 7.5 bbls of condensate were recovered. While recovering free standing fluid the hydrovac operator punctured the liner. The initial C-141 was submitted to OCD District II on March 1, 2022 and assigned incident number nAPP220565277.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,547 feet above mean sea level (msl).
- The surface topography slopes gradually decrease to the northwest.
- There are no surface water features within 1,000 feet of the Site.
- Karst data provided by the USGS describes this site as "Medium Risk" potential.
- The soils are designated as Berino Loamy fine sand, 0 to 3 percent slopes, consisting of 0 to 12 inches loamy fine sand, underlain by 12 to 58 inches of sandy clay loam, and 58-60 inches of clay loam.
- The surface geology is Eolian and piedmont deposits (Holocene to middle Pleistocene) and consists of interlaid Eolian sands and piedmont slope deposits.
- Groundwater occurs at a depth greater than 60 feet bgs based on depth to groundwater measurements 72 hours after installing a temporary ground water bore (S-1) on November 11, 2021.

Appendix A presents USGS karst risk potential map. Appendix B presents the soil boring (GW-1) log. Figure 4 presents a map showing the boring location.

1.3 Remediation Levels

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:

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SND 1201 Federal 004 3002H, Eddy County, New Mexico
July 6, 2022

- 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.

2.0 DELINEATION

The first release (nAPP2106659781) was fully delineated between June 8, 2021, and November 11, 2021. The delineation was reported to the NMOCD in the document titled "Tracking Number: nAPP2106659781, Delineation Report and Remediation Plan, SND 1201 Federal 004 3002H (Sand Dunes) Condensate Release, Eddy County, New Mexico, December 28, 2021", and recommended the following remedial actions:

- Excavate soil from an area measuring approximately 169 square feet encompassing S-3 to a depth of 1-foot bgs.
- Excavate soil from an area measuring approximately 504 square feet encompassing S-1, S-2, and S-4 to a depth of 10 feet bgs.
- 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 II.

NMOCD approved the remediation plan on February 22, 2022. Table 1a presents the delineation soil sample analytical data summary. Appendix C presents the NMOCD communications.

On March 4, 2022, LAI Personnel used a stainless-steel hand auger to collect soil samples from three (3) locations (S-1 through S-3) inside the second spill (nAPP220565277). The samples at locations S-1 and S-2 were collected from 0.5, 1.0, 2.0, 3.0, 4.0, and 4.5 feet bgs. The samples at location S-2 (duplicated?) were collected at 0.5, 1.0, 2.0, 3.0, 4.0, and 5.0 feet bgs.

The soil samples were delivered under chain of custody and preservation to Xenco in Midland, Texas, which analyzed for 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 chloride were below the NMOCD remediation standards in Table 1 (19.15.29 NMAC) of 10 (mg/Kg), 50 (mg/Kg), and 600 (mg/Kg), respectively. TPH exceeded the NMOCD delineation limit of 100 mg/Kg in the sample S-2, 0.5 feet (1,530 mg/Kg).

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SND 1201 Federal 004 3002H, Eddy County, New Mexico

July 6, 2022

On March 24, 2022, LAI personnel used a stainless-steel auger to collect horizontal delineation samples at three (3) locations (S-4 through S-6) outside the second spill (nAPP2205652777). The samples were collected from 0.5, 1.0, and 1.5 feet bgs. Laboratory analysis reported benzene, BTEX, TPH, and chloride below the NMOCD remediation standards in Table 1 (19.15.29 NMAC) of 10 (mg/Kg), 50 (mg/Kg), 100 (mg/Kg), and (600 mg/Kg) respectively. Appendix D presents the laboratory reports.

3.0 REMEDIATION

On June 6, 2022, SDR Enterprise, LLC. (SDR), under supervision from LAI personnel, began to excavate soil using a track hoe from the first spill (nAPP2106659781) area measuring approximately 169 square feet encompassing S-3 to a depth of 1-foot bgs and 504 square feet encompassing S-1, S-2, and S-4 to a depth of 10 feet bgs. Contaminated soil was stockpiled on a liner adjacent to the excavation.

On June 7, 2022, SDR, under supervision of LAI personnel, excavated soil by hand from the second spill (nAPP2205652777) area measuring 22 square feet encompassing S-2 to a depth of 1-foot bgs. LAI personnel collected eleven (11) confirmation soil samples from the bottom and sidewalls from the first spill (nAPP2106659781) excavation and two (2) confirmation soil samples from the second (nAPP2205652777) spill excavation. Xenco analyzed the samples for BTEX, TPH, and Chloride by EPA SW-846 Methods 8021B, 8015M, and 300.0E, respectively. Benzene, BTEX, TPH, and chloride were reported below the NMOCD remediation standards in all confirmation samples.

On June 20, 2022, SDR transported approximately 205 cubic yards of contaminated soil from both releases to the R360 Halfway Facility between Carlsbad and Hobbs, New Mexico. On June 21, 2022, SDR backfilled the excavations with clean caliche, which LAI personnel confirmed acceptable by three (3) composite samples (BF-1 through BF-3) that Xenco analyzed the samples for benzene, BTEX, TPH, and chloride. Benzene, BTEX, and TPH were below the analytical method reporting limits (RLs) and chloride was less than 600 mg/Kg.

On June 23, 2022, Akome Inc., Hobbs, New Mexico, repaired the liner damaged by the hydrovac operator during the initial cleanup operation. Akome welded a 30-mil polyethylene liner to the existing liner. Appendix E presents the photographic documentation.

4.0 CLOSURE

Chevron respectfully requests no further action for releases nAPP2106659781 and nAPP2205652777.

Tables

Table 1a

Soil Sample Analytical Data Summary
Sand Dunes 11 CS SND 1201 Federal 004 3002H
Eddy County, New Mexico
North 32° 13' 38.20", West 103° 44' 38.11"

Page 1 of 2

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C10 (mg/Kg)	C10 - C28 (mg/Kg)	C28 - C36 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)	
Remediation Level:						10	50	100 / 2,500			600 / 10,000
S-1	0.5	6/8/2021	In-Situ	0.0562	2.62	155	358	985	1,500	875	
	1	6/8/2021	In-Situ	0.0513	1.47	182	179	448	809	460	
	1	8/23/2021	In-Situ	0.285	24.3	514	125	<49.9	639	216	
	3	8/23/2021	In-Situ	1.09	23.1	2,480	144	<49.8	2,620	24.6	
	5	8/23/2021	In-Situ	258	1,780	16,600	454	<250	17,100	19.8	
	10	8/23/2021	In-Situ	737	4,040	30,500	543	<250	31,000	20.3	
	15	11/11/2021	In-Situ	<0.00200	0.0117	<50.0	54.0	<50.0	54.0	31.5	
	20	11/11/2021	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	24.7	
S-2	0.5	6/8/2021	In-Situ	<0.0397	0.306	54.8	129	248	432	21.4	
	1	6/8/2021	In-Situ	<0.100	1.10	<49.8	<49.8	110	110	7.64	
	1	8/23/2021	In-Situ	<0.100	4.55	137	68.1	<49.8	205	25.4	
	3	8/23/2021	In-Situ	0.621	42.3	1,610	90.7	<50.0	1,700	50.5	
	5	8/23/2021	In-Situ	0.543	55.8	171	<50.0	<50.0	171	73.3	
	10	8/23/2021	In-Situ	<0.0996	0.208	<49.9	<49.9	<49.9	<49.9	24.0	
S-3	0.5	6/8/2021	In-Situ	<0.0996	0.652	157	183	288	628	41.6	
	1	8/23/2021	In-Situ	<0.0200	<0.0400	<49.9	<49.9	<49.9	<49.9	220	
	3	8/23/2021	In-Situ	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	34.3	
	5	8/23/2021	In-Situ	<0.00396	<0.00396	<49.9	<49.9	<49.9	<49.9	21.4	
	10	8/23/2021	In-Situ	0.0146	0.05000	<49.8	<49.8	<49.8	<49.8	21.4	
S-4	0.5	6/8/2021	In-Situ	<0.101	0.368	92.1	329	782	1,200	264	
	1	6/8/2021	In-Situ	<0.101	1.05	128	95.9	195	419	88.8	
	1	8/23/2021	In-Situ	1.84	25.8	211	106	<49.8	317	121	

Table 1a
Soil Sample Analytical Data Summary
Sand Dunes 11 CS SND 1201 Federal 004 3002H
Eddy County, New Mexico
North 32° 13' 38.20", West 103° 44' 38.11"

Page 2 of 2

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C10 (mg/Kg)	C10 - C28 (mg/Kg)	C28 - C36 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)	
Remediation Level:						10	50	100 / 2,500			600 / 10,000
	3	8/23/2021	In-Situ	0.00240	0.0164	<50.0	<50.0	<50.0	<50.0	22.9	
	5	8/23/2021	In-Situ	0.380	17.1	183	<50.0	<50.0	183	23.7	
	10	8/23/2021	In-Situ	131	1,230	27,400	2,980	<250	30,400	23.7	
	15	11/11/2021	In-Situ	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	47.0	
	20	11/11/2021	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	35.8	
S-5	0.5	6/8/2021	In-Situ	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	246	
S-6	0.5	6/8/2021	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	223	
S-7	0.5	6/8/2021	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	15.0	

Notes: Analysis performed by Xenco Laboratories (Xenco) in Midland, Texas for BTEX, TPH, and chloride by EPA SW-846 Method 8021B, 8015M and 300, respectively.

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

Table 1b

Soil Sample Analytical Data Summary
Sand Dunes 11CS SND 1201 Federal 004 3002H Second Spill
Eddy County, New Mexico
32° 13' 38.20" North, 103° 44' 38.11" West

Page 1 of 2

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C10 (mg/Kg)	C10 - C28 (mg/Kg)	C28 - C36 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				10	50				100/2,500	600/10,000
S-1	0.5	3/4/2022	In-Situ	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	19.3
	1	3/4/2022	In-Situ	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	7.71
	2	3/4/2022	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	5.64
	3	3/4/2022	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	7.13
	4	3/4/2022	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	11.7
	4.5	3/4/2022	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	11.6
S-2	0.5	3/4/2022	In-Situ	<0.00198	<0.00396	1,050	484	<49.9	1,530	24.0
	1	3/4/2022	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	10.9
	2	3/4/2022	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	8.55
	3	3/4/2022	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	13.4
	4	3/4/2022	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	12.3
	5	3/4/2022	In-Situ	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	10.7
S-3	0.5	3/4/2022	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	66.4
	1	3/4/2022	In-Situ	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	25.2
	2	3/4/2022	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	18.6
	3	3/4/2022	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	5.96
	4	3/4/2022	In-Situ	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	48.7
	4.5	3/4/2022	In-Situ	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	12.1
S-4	0.5	3/24/2022	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	38.4
	1	3/24/2022	In-Situ	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	19.2
	1.5	3/24/2022	In-Situ	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	13.5
S-5	0.5	3/24/2022	In-Situ	<0.00115	<0.00230	<28.7	<28.7	<28.7	<28.7	66.6

Table 1b

Soil Sample Analytical Data Summary
Sand Dunes 11CS SND 1201 Federal 004 3002H Second Spill
Eddy County, New Mexico
32° 13' 38.20" North, 103° 44' 38.11" West

Page 2 of 2

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C10 (mg/Kg)	C10 - C28 (mg/Kg)	C28 - C36 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				10	50	100/2,500				600/10,000
	1	3/24/2022	In-Situ	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	47.3
	1.5	3/24/2022	In-Situ	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	33.2
S-6	0.5	3/24/2022	In-Situ	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	9.68
	1	3/24/2022	In-Situ	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	6.04
	1.5	3/24/2022	In-Situ	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	7.67

Notes: Analysis performed by Xenco Laboratories (Xenco) 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

Confirmation Soil Sample Analytical Data Summary
Sand Dunes 11 CS SND 1201 Federal 004 3002H - nAPP2106659781
Eddy County, New Mexico
North 32° 13' 38.20", West 103° 44' 38.11"

Sample ID	Location	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
C-1	Bottom	1	6/7/2022	In-situ	<0.00199	0.11500	<50.0	<50.0	<50.0	<50.0	126
C-2	Bottom	10	6/7/2022	In-situ	<0.0400	0.533	<49.9	<49.9	<49.9	<49.9	58.4
C-3	Bottom	10	6/7/2022	In-situ	<0.00199	0.00553	<50.0	<50.0	<50.0	<50.0	35.3
C-4	Bottom	10	6/7/2022	In-situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	53.2
SW-1	Sidewall	0-1.0	6/7/2022	In-situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	77.2
SW-2	Sidewall	0-4.1	6/7/2022	In-situ	<0.00198	0.00455	<50.0	<50.0	<50.0	<50.0	23.5
SW-2	Sidewall	4.1-10	6/7/2022	In-situ	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	14.2
SW-3	Sidewall	0-4.1	6/7/2022	In-situ	0.00257	1.08	<49.9	<49.9	<49.9	<49.9	24.8
SW-3	Sidewall	4.1-10	6/7/2022	In-situ	<0.0200	1.39	<50.0	<50.0	<50.0	<50.0	14.0
SW-4	Sidewall	0-4.1	6/7/2022	In-situ	<0.0200	0.0886	<50.0	<50.0	<50.0	<50.0	43.2
SW-4	Sidewall	4.1-10	6/7/2022	In-situ	<0.0199	8.03	86.4	<50.0	<50.0	86.4	40.5
Backfill-1	--	--	6/7/2022	In-Situ	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	95.2
Backfill-3	--	--	6/7/2022	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	128
Backfill-3	--	--	6/7/2022	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.0	138

Notes: analysis performed by Xenco Laboratories (Xenco), Midland, Texas and Carlsbad, New Mexico by EPA SW-846 Methods 8021B (BTEX) and 8015M (TPH), and Method 300 (chloride)

Depth in feet below ground surface (bgs)

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

Bold and Highlighted Denotes Concentrations Above OCD Closure Criteria

Table 2b

Confirmation Soil Sample Analytical Data Summary
Sand Dunes 11 CS SND 1201 Federal 004 3002H - nAPP 2205652777
Eddy County, New Mexico
32° 13' 38.20" North, 103° 44' 38.11" West

Sample ID	Location	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
C-1	Bottom	1	6/7/2022	In-situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	39
SW-1	Sidewall	0-1	6/7/2022	In-situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	53
Backfill-1	--	--	6/7/2022	In-Situ	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	95.2
Backfill-3	--	--	6/7/2022	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	128
Backfill-3	--	--	6/7/2022	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	138

Notes: analysis performed by Xenco Laboratories (Xenco), Midland, Texas and Carlsbad, New Mexico by EPA SW-846 Methods 8021B (BTEX) and 8015M (TPH), and Method 300 (chloride)

Depth in feet below ground surface (bgs)

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

Bold and Highlighted Denotes Conetrations Above OCD Closure Criteria

Figures

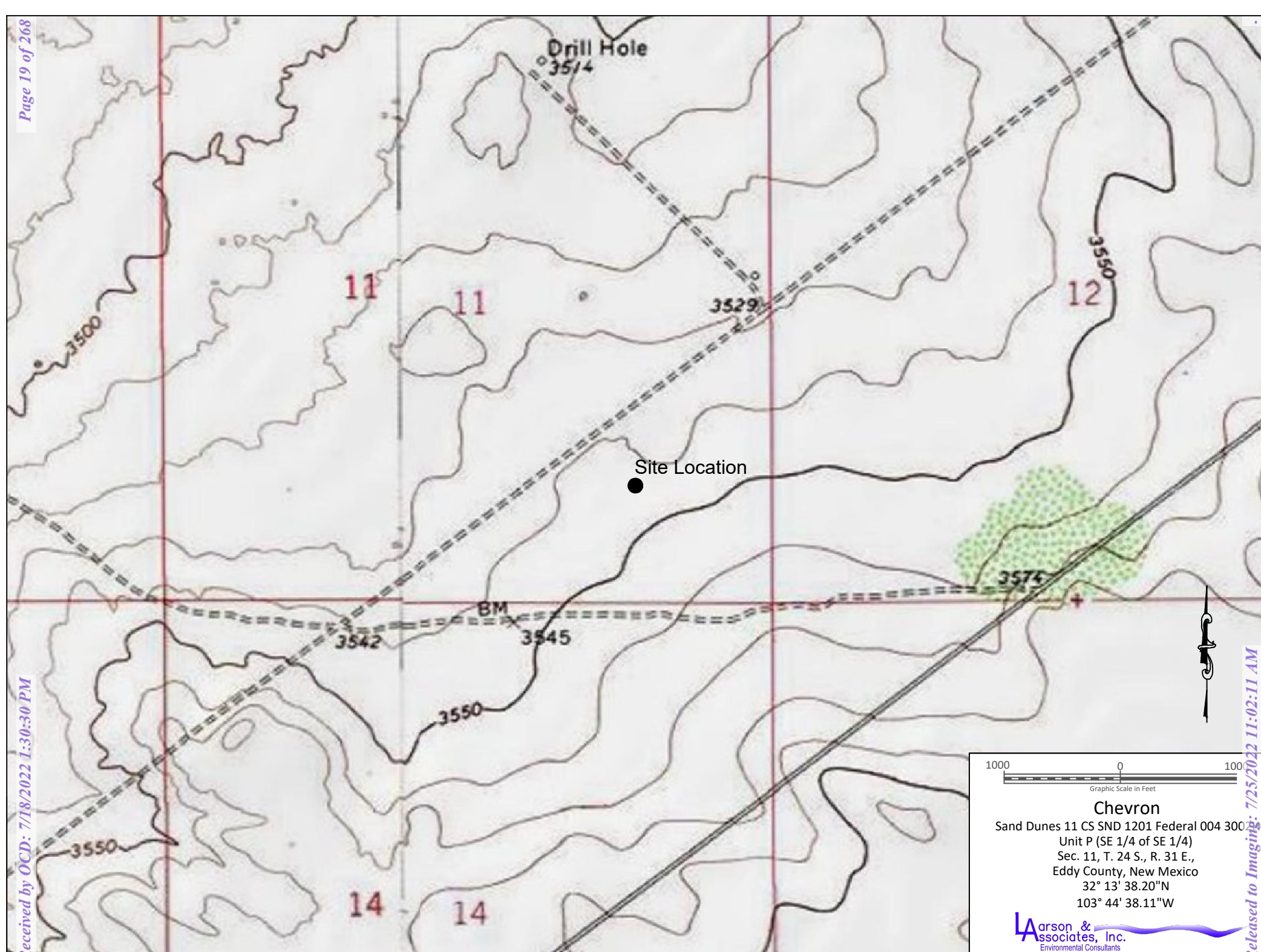
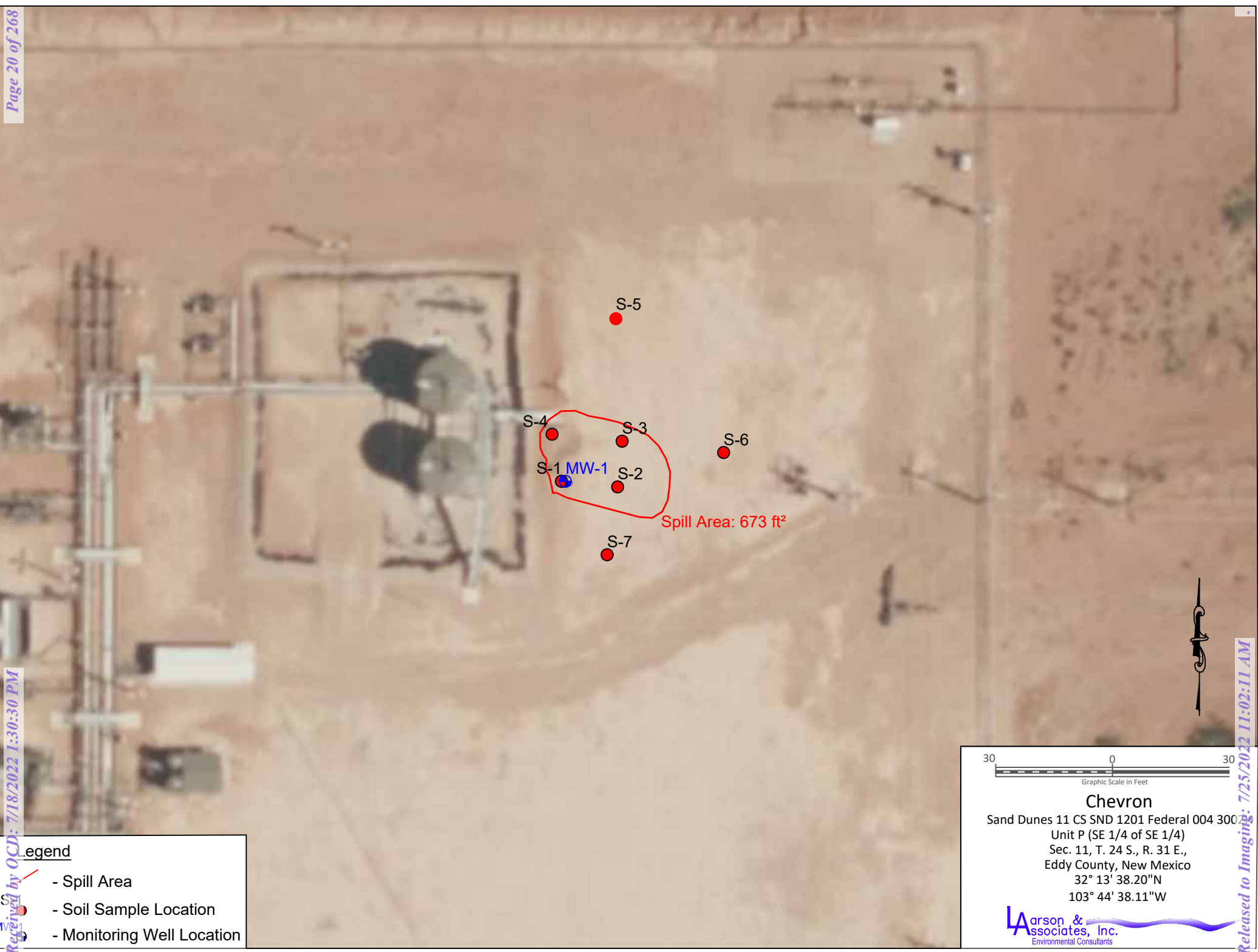


Figure 1 - Topographic Map



Legend

- Spill Area
- Soil Sample Location
- Monitoring Well Location



Chevron
Sand Dunes 11 CS SND 1201 Federal 004 300
Unit P (SE 1/4 of SE 1/4)
Sec. 11, T. 24 S., R. 31 E.,
Eddy County, New Mexico
32° 13' 38.20"N
103° 44' 38.11"W

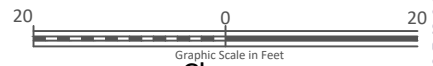
Larson & Associates, Inc.
Environmental Consultants

Figure 2a - Aerial Map



Legend

-  - Soil Sample Location



Chevron
Sand Dunes 11 CS SND 1201
Federal 004 3002H Second Spill
Unit P (SE 1/4 of SE 1/4)
Sec. 11, T. 24 S., R. 31 E.,
Eddy County, New Mexico
32° 13' 38.20"N
103° 44' 38.11"W

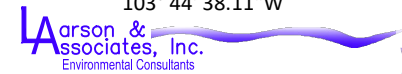
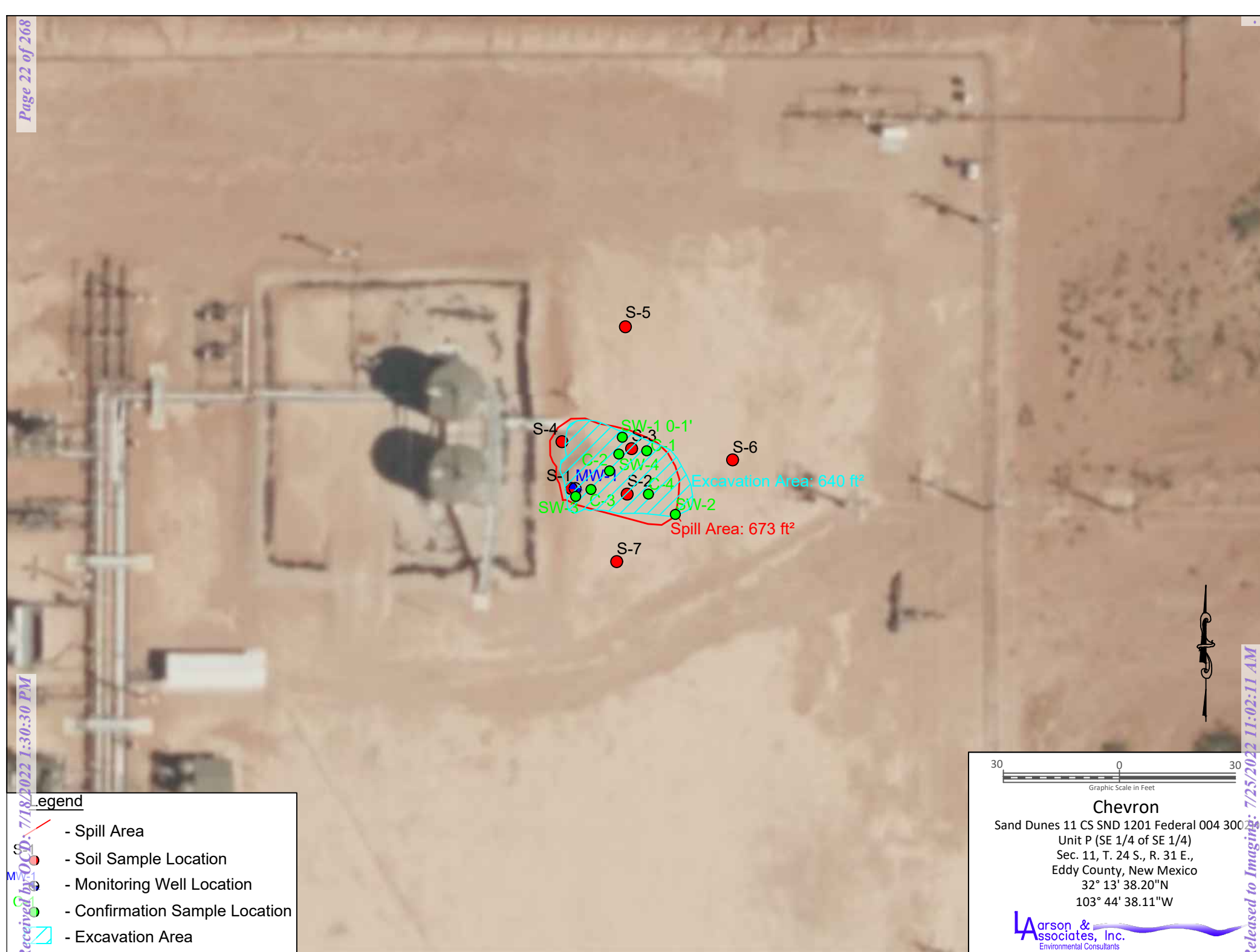


Figure 2b - Aerial Map



Received by: OGD: 7/18/2022 1:30:30 PM
Released to Imaging: 7/25/2022 11:02:11 AM



Legend

-  - Soil Sample Location
-  - Confirmation Sample Location
-  - Excavation Location



Chevron
Sand Dunes 11 CS SND 1201
Federal 004 3002H Second Spill
Unit P (SE 1/4 of SE 1/4)
Sec. 11, T. 24 S., R. 31 E.,
Eddy County, New Mexico
32° 13' 38.20"N
103° 44' 38.11"W

Larson & Associates, Inc.
Environmental Consultants

Figure 3b - Aerial Map Showing Excavation Area and Confirmation Samples



Legend

● - Monitoring Well Location

30 0 30
Graphic Scale in Feet

Chevron
Sand Dunes 11 CS SND 1201 Federal 004 300
Unit P (SE 1/4 of SE 1/4)
Sec. 11, T. 24 S., R. 31 E.,
Eddy County, New Mexico
32° 13' 38.20"N
103° 44' 38.11"W

Larson & Associates, Inc.
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Figure 4 - Aerial Map Showing Monitoring Well and Second Spill Location

Appendix A

USGS Karst Risk Potential Map



Appendix B
Soil Boring Log

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 11:30 Finish: 12:49 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING										SAMPLE			REMARKS		
					PPM X 0.0										NUMBER	PID READING	RECOVERY	DEPTH	BACKGROUND PID READING	
					2	4	6	8	10	12	14	16	18							
	0	Sand, 5YR 4/6, Yellowish Red, Fine Grained Quartz Sand, Well Sorted	SW																	
	5	Caliche, 7.5YR 8/4, Pink, Moderately Sorted, 1-2mm Clasts	Caliche																	
	10																			
	15	Sand, 7.5YR 6/4, Light Brown, Fine Grained Quartz Sand, Moderately Sorted, 2-4mm Clasts	SW																	
	20	5YR 5/6, Yellowish Red, Fine Grained Quartz Sand, Moderately Sorted, 1-2mm Clasts	SW																	
	25																			
	30	7.5YR 6/4, Light Brown, Fine Grained Quartz Sand, Moderately Sorted, 2-4mm Clasts	SW																	
	35																			
	40																			
	45																			
	50	5YR 4/6, Yellowish Red, Fine Grained Quartz Sand, Moderately Sorted, 1-2mm, Clasts	SW																	
	55																			
	60	TD: 60' Dry after 72 hours																		

☐ ONE CONTINUOUS AUGER SAMPLER

☐ STANDARD PENETRATION TEST

☐ UNDISTURBED SAMPLE

☐ WATER TABLE (24 HRS)

WATER TABLE (TIME OF BORING)

LABORATORY TEST LOCATION

PENETROMETER (TONS/ SQ. FT)

NO RECOVERY

JOB NUMBER : Chevron/ 21-0100-17HOLE DIAMETER : 5"LOCATION : Sand Dunes 11 CS SND 1201 Federal 004 3002HLAI GEOLOGIST : R. NelsonDRILLING CONTRACTOR : SDIDRILLING METHOD : Air Rotary

DRILL DATE :
11/11/2021BORING NUMBER :
S-1

Appendix C
NMOCD Communications

From: [Nobui, Jennifer, EMNRD](#)
To: [Robert Nelson](#)
Cc: [Bratcher, Mike, EMNRD](#); [Hamlet, Robert, EMNRD](#); [Harimon, Jocelyn, EMNRD](#)
Subject: RE: [EXTERNAL] Sand Dunes 11CS SND 1201 Federal 004 3002H (nAPP2106659781 & nAPP2205652777) Excavation Backfill Notice
Date: Tuesday, June 14, 2022 4:41:19 PM
Attachments: [image001.png](#)

Robert,

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

Thanks,
Jennifer Nobui

From: Robert Nelson <rnelson@laenvironmental.com>
Sent: Tuesday, June 14, 2022 3:12 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>
Cc: Barnhill, Amy D. <ABarnhill@chevron.com>; Mark Larson <Mark@laenvironmental.com>; Daniel St. Germain <dstgermain@laenvironmental.com>
Subject: [EXTERNAL] Sand Dunes 11CS SND 1201 Federal 004 3002H (nAPP2106659781 & nAPP2205652777) Excavation Backfill Notice

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

Hello Mr. Hamlet and Ms. Nobui,

Larson & Associates, Inc. (LAI), on behalf of Chevron USA, Inc. (Chevron) submits the attached confirmation (post remediation) laboratory analytical data and sample location maps to the New Mexico Oil Conservation Division (OCD) District II to provide two (2) business days notification prior to backfilling the excavations at the Sand Dunes 11CS SND 1201 Federal 004 3002H (nAPP2106659781 & nAPP2205652777) (Site) in Eddy County, New Mexico. Please feel free to contact Amy Barnhill with Chevron at (432) 687-7108 or ABarnhill@chevron.com, Mark Larson (432) 556-8656 or mark@laenvironmental.com, or me with any questions or concerns.

Thank you,

Robert Nelson
Sr. Geologist
Office – 432-687-0901
Cell – 432-664-4804
rnelson@laenvironmental.com



Appendix D
Laboratory Reports



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-2861-1
Laboratory Sample Delivery Group: 21-0100-17
Client Project/Site: SND 1201
Revision: 1

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

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
6/11/2021 4:27:42 PM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS

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results through
TotalAccess

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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: SND 1201

Laboratory Job ID: 880-2861-1
SDG: 21-0100-17

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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

Eurofins Xenco, Midland

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Job ID: 880-2861-1

Laboratory: Eurofins Xenco, Midland**Narrative****Job Narrative
880-2861-1****Comments**

No additional comments.

Revision

The report being provided is a revision of the original report sent on 6/11/2021. The report (revision 1) is being revised due to: Change sample 10 to S-7 and project ID to SND 1201 per Robert Nelson (email)..

Receipt

The samples were received on 6/8/2021 4:25 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 6.0° C.

GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: S-2, 0.5' (880-2861-3), S-2, 1' (880-2861-4) and S-3, 0.5' (880-2861-5) at 20.0, 50.0 and 50.0. Elevated reporting limits (RLs) are provided.

Method 8021B: Internal standard responses were outside of acceptance limits for the following samples: S-7, 0.5' (880-2861-10). The sample(s) shows evidence of matrix interference.

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

GC Semi VOA

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

General Chemistry

No analytical or quality issues were noted, other than those described 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: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Client Sample ID: S-1, 0.5'

Lab Sample ID: 880-2861-1

Date Collected: 06/08/21 11:03

Matrix: Solid

Date Received: 06/08/21 16:29

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0562		0.0398	mg/Kg		06/09/21 08:34	06/09/21 19:58	20
Toluene	0.105		0.0398	mg/Kg		06/09/21 08:34	06/09/21 19:58	20
Ethylbenzene	0.443		0.0398	mg/Kg		06/09/21 08:34	06/09/21 19:58	20
m-Xylene & p-Xylene	1.54		0.0797	mg/Kg		06/09/21 08:34	06/09/21 19:58	20
o-Xylene	0.477		0.0398	mg/Kg		06/09/21 08:34	06/09/21 19:58	20
Xylenes, Total	2.02		0.0797	mg/Kg		06/09/21 08:34	06/09/21 19:58	20
Total BTEX	2.62		0.0797	mg/Kg		06/09/21 08:34	06/09/21 19:58	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	149	S1+	70 - 130	06/09/21 08:34	06/09/21 19:58	20
1,4-Difluorobenzene (Surr)	103		70 - 130	06/09/21 08:34	06/09/21 19:58	20

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	155		49.8	mg/Kg		06/09/21 09:31	06/09/21 14:15	1
Diesel Range Organics (Over C10-C28)	358		49.8	mg/Kg		06/09/21 09:31	06/09/21 14:15	1
Oil Range Organics (Over C28-C36)	985		49.8	mg/Kg		06/09/21 09:31	06/09/21 14:15	1
Total TPH	1500		49.8	mg/Kg		06/09/21 09:31	06/09/21 14:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	06/09/21 09:31	06/09/21 14:15	1
o-Terphenyl	96		70 - 130	06/09/21 09:31	06/09/21 14:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	875		4.97	mg/Kg			06/10/21 16:59	1

Client Sample ID: S-1, 1'

Lab Sample ID: 880-2861-2

Date Collected: 06/08/21 11:08

Matrix: Solid

Date Received: 06/08/21 16:29

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0513		0.0398	mg/Kg		06/09/21 08:34	06/09/21 20:18	20
Toluene	0.108		0.0398	mg/Kg		06/09/21 08:34	06/09/21 20:18	20
Ethylbenzene	0.342		0.0398	mg/Kg		06/09/21 08:34	06/09/21 20:18	20
m-Xylene & p-Xylene	0.755		0.0797	mg/Kg		06/09/21 08:34	06/09/21 20:18	20
o-Xylene	0.213		0.0398	mg/Kg		06/09/21 08:34	06/09/21 20:18	20
Xylenes, Total	0.968		0.0797	mg/Kg		06/09/21 08:34	06/09/21 20:18	20
Total BTEX	1.47		0.0797	mg/Kg		06/09/21 08:34	06/09/21 20:18	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	137	S1+	70 - 130	06/09/21 08:34	06/09/21 20:18	20
1,4-Difluorobenzene (Surr)	100		70 - 130	06/09/21 08:34	06/09/21 20:18	20

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	182		49.8	mg/Kg		06/09/21 09:31	06/09/21 13:12	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Client Sample ID: S-1, 1'

Lab Sample ID: 880-2861-2

Date Collected: 06/08/21 11:08

Matrix: Solid

Date Received: 06/08/21 16:29

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	179		49.8	mg/Kg		06/09/21 09:31	06/09/21 13:12	1
Oil Range Organics (Over C28-C36)	448		49.8	mg/Kg		06/09/21 09:31	06/09/21 13:12	1
Total TPH	809		49.8	mg/Kg		06/09/21 09:31	06/09/21 13:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	06/09/21 09:31	06/09/21 13:12	1
o-Terphenyl	111		70 - 130	06/09/21 09:31	06/09/21 13:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	460		5.02	mg/Kg			06/10/21 17:04	1

Client Sample ID: S-2, 0.5'

Lab Sample ID: 880-2861-3

Date Collected: 06/08/21 11:16

Matrix: Solid

Date Received: 06/08/21 16:29

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0397	U	0.0397	mg/Kg		06/09/21 08:34	06/09/21 20:39	20
Toluene	0.0443		0.0397	mg/Kg		06/09/21 08:34	06/09/21 20:39	20
Ethylbenzene	0.129		0.0397	mg/Kg		06/09/21 08:34	06/09/21 20:39	20
m-Xylene & p-Xylene	0.133		0.0794	mg/Kg		06/09/21 08:34	06/09/21 20:39	20
o-Xylene	<0.0397	U	0.0397	mg/Kg		06/09/21 08:34	06/09/21 20:39	20
Xylenes, Total	0.133		0.0794	mg/Kg		06/09/21 08:34	06/09/21 20:39	20
Total BTEX	0.306		0.0794	mg/Kg		06/09/21 08:34	06/09/21 20:39	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130	06/09/21 08:34	06/09/21 20:39	20
1,4-Difluorobenzene (Surr)	106		70 - 130	06/09/21 08:34	06/09/21 20:39	20

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	54.8		50.0	mg/Kg		06/09/21 09:31	06/09/21 14:36	1
Diesel Range Organics (Over C10-C28)	129		50.0	mg/Kg		06/09/21 09:31	06/09/21 14:36	1
Oil Range Organics (Over C28-C36)	248		50.0	mg/Kg		06/09/21 09:31	06/09/21 14:36	1
Total TPH	432		50.0	mg/Kg		06/09/21 09:31	06/09/21 14:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	06/09/21 09:31	06/09/21 14:36	1
o-Terphenyl	111		70 - 130	06/09/21 09:31	06/09/21 14:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.4		5.00	mg/Kg			06/10/21 17:09	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Client Sample ID: S-2, 1'

Lab Sample ID: 880-2861-4

Date Collected: 06/08/21 11:22

Matrix: Solid

Date Received: 06/08/21 16:29

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.100	U	0.100	mg/Kg		06/09/21 08:34	06/09/21 20:59	50
Toluene	0.226		0.100	mg/Kg		06/09/21 08:34	06/09/21 20:59	50
Ethylbenzene	0.241		0.100	mg/Kg		06/09/21 08:34	06/09/21 20:59	50
m-Xylene & p-Xylene	0.367		0.200	mg/Kg		06/09/21 08:34	06/09/21 20:59	50
o-Xylene	0.261		0.100	mg/Kg		06/09/21 08:34	06/09/21 20:59	50
Xylenes, Total	0.628		0.200	mg/Kg		06/09/21 08:34	06/09/21 20:59	50
Total BTEX	1.10		0.200	mg/Kg		06/09/21 08:34	06/09/21 20:59	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130	06/09/21 08:34	06/09/21 20:59	50
1,4-Difluorobenzene (Surr)	106		70 - 130	06/09/21 08:34	06/09/21 20:59	50

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		06/09/21 09:31	06/09/21 14:57	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		06/09/21 09:31	06/09/21 14:57	1
Oil Range Organics (Over C28-C36)	110		49.8	mg/Kg		06/09/21 09:31	06/09/21 14:57	1
Total TPH	110		49.8	mg/Kg		06/09/21 09:31	06/09/21 14:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	06/09/21 09:31	06/09/21 14:57	1
o-Terphenyl	94		70 - 130	06/09/21 09:31	06/09/21 14:57	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.64		5.04	mg/Kg			06/10/21 17:14	1

Client Sample ID: S-3, 0.5'

Lab Sample ID: 880-2861-5

Date Collected: 06/08/21 11:27

Matrix: Solid

Date Received: 06/08/21 16:29

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0996	U	0.0996	mg/Kg		06/09/21 08:34	06/09/21 21:19	50
Toluene	0.163		0.0996	mg/Kg		06/09/21 08:34	06/09/21 21:19	50
Ethylbenzene	0.304		0.0996	mg/Kg		06/09/21 08:34	06/09/21 21:19	50
m-Xylene & p-Xylene	<0.199	U	0.199	mg/Kg		06/09/21 08:34	06/09/21 21:19	50
o-Xylene	0.185		0.0996	mg/Kg		06/09/21 08:34	06/09/21 21:19	50
Xylenes, Total	<0.199	U	0.199	mg/Kg		06/09/21 08:34	06/09/21 21:19	50
Total BTEX	0.652		0.199	mg/Kg		06/09/21 08:34	06/09/21 21:19	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130	06/09/21 08:34	06/09/21 21:19	50
1,4-Difluorobenzene (Surr)	104		70 - 130	06/09/21 08:34	06/09/21 21:19	50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	157		49.9	mg/Kg		06/09/21 09:31	06/09/21 15:18	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Client Sample ID: S-3, 0.5'

Lab Sample ID: 880-2861-5

Date Collected: 06/08/21 11:27

Matrix: Solid

Date Received: 06/08/21 16:29

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	183		49.9	mg/Kg		06/09/21 09:31	06/09/21 15:18	1
Oil Range Organics (Over C28-C36)	288		49.9	mg/Kg		06/09/21 09:31	06/09/21 15:18	1
Total TPH	628		49.9	mg/Kg		06/09/21 09:31	06/09/21 15:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	06/09/21 09:31	06/09/21 15:18	1
o-Terphenyl	96		70 - 130	06/09/21 09:31	06/09/21 15:18	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41.6		4.97	mg/Kg			06/10/21 17:29	1

Client Sample ID: S-4, 0.5'

Lab Sample ID: 880-2861-6

Date Collected: 06/08/21 11:30

Matrix: Solid

Date Received: 06/08/21 16:29

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.101	U	0.101	mg/Kg		06/09/21 15:00	06/10/21 01:26	50
Toluene	<0.101	U	0.101	mg/Kg		06/09/21 15:00	06/10/21 01:26	50
Ethylbenzene	0.209		0.101	mg/Kg		06/09/21 15:00	06/10/21 01:26	50
m-Xylene & p-Xylene	<0.202	U	0.202	mg/Kg		06/09/21 15:00	06/10/21 01:26	50
o-Xylene	0.159		0.101	mg/Kg		06/09/21 15:00	06/10/21 01:26	50
Xylenes, Total	<0.202	U	0.202	mg/Kg		06/09/21 15:00	06/10/21 01:26	50
Total BTEX	0.368		0.202	mg/Kg		06/09/21 15:00	06/10/21 01:26	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	06/09/21 15:00	06/10/21 01:26	50
1,4-Difluorobenzene (Surr)	88		70 - 130	06/09/21 15:00	06/10/21 01:26	50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	92.1		49.8	mg/Kg		06/09/21 09:31	06/09/21 15:38	1
Diesel Range Organics (Over C10-C28)	329		49.8	mg/Kg		06/09/21 09:31	06/09/21 15:38	1
Oil Range Organics (Over C28-C36)	782		49.8	mg/Kg		06/09/21 09:31	06/09/21 15:38	1
Total TPH	1200		49.8	mg/Kg		06/09/21 09:31	06/09/21 15:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	06/09/21 09:31	06/09/21 15:38	1
o-Terphenyl	93		70 - 130	06/09/21 09:31	06/09/21 15:38	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	264		5.02	mg/Kg			06/10/21 17:33	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Client Sample ID: S-4, 1'

Lab Sample ID: 880-2861-7

Date Collected: 06/08/21 11:33

Matrix: Solid

Date Received: 06/08/21 16:29

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.101	U	0.101	mg/Kg		06/09/21 15:00	06/10/21 01:47	50
Toluene	<0.101	U	0.101	mg/Kg		06/09/21 15:00	06/10/21 01:47	50
Ethylbenzene	0.262		0.101	mg/Kg		06/09/21 15:00	06/10/21 01:47	50
m-Xylene & p-Xylene	0.596		0.202	mg/Kg		06/09/21 15:00	06/10/21 01:47	50
o-Xylene	0.192		0.101	mg/Kg		06/09/21 15:00	06/10/21 01:47	50
Xylenes, Total	0.788		0.202	mg/Kg		06/09/21 15:00	06/10/21 01:47	50
Total BTEX	1.05		0.202	mg/Kg		06/09/21 15:00	06/10/21 01:47	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	06/09/21 15:00	06/10/21 01:47	50
1,4-Difluorobenzene (Surr)	80		70 - 130	06/09/21 15:00	06/10/21 01:47	50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	128		49.8	mg/Kg		06/09/21 09:31	06/09/21 15:59	1
Diesel Range Organics (Over C10-C28)	95.9		49.8	mg/Kg		06/09/21 09:31	06/09/21 15:59	1
Oil Range Organics (Over C28-C36)	195		49.8	mg/Kg		06/09/21 09:31	06/09/21 15:59	1
Total TPH	419		49.8	mg/Kg		06/09/21 09:31	06/09/21 15:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	06/09/21 09:31	06/09/21 15:59	1
o-Terphenyl	101		70 - 130	06/09/21 09:31	06/09/21 15:59	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	88.8		5.00	mg/Kg			06/10/21 17:38	1

Client Sample ID: S-5, 0.5'

Lab Sample ID: 880-2861-8

Date Collected: 06/08/21 11:36

Matrix: Solid

Date Received: 06/08/21 16:29

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/09/21 15:00	06/10/21 00:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/09/21 15:00	06/10/21 00:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/09/21 15:00	06/10/21 00:25	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		06/09/21 15:00	06/10/21 00:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/09/21 15:00	06/10/21 00:25	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		06/09/21 15:00	06/10/21 00:25	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		06/09/21 15:00	06/10/21 00:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130	06/09/21 15:00	06/10/21 00:25	1
1,4-Difluorobenzene (Surr)	91		70 - 130	06/09/21 15:00	06/10/21 00:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 17:46	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Client Sample ID: S-5, 0.5'

Lab Sample ID: 880-2861-8

Date Collected: 06/08/21 11:36

Matrix: Solid

Date Received: 06/08/21 16:29

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 17:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 17:46	1
Total TPH	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 17:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130			06/09/21 09:31	06/09/21 17:46	1
o-Terphenyl	98		70 - 130			06/09/21 09:31	06/09/21 17:46	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	246		5.01	mg/Kg			06/10/21 17:43	1

Client Sample ID: S-6, 0.5'

Lab Sample ID: 880-2861-9

Date Collected: 06/08/21 11:41

Matrix: Solid

Date Received: 06/08/21 16:29

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		06/09/21 15:00	06/10/21 00:46	1
Toluene	<0.00201	U	0.00201	mg/Kg		06/09/21 15:00	06/10/21 00:46	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		06/09/21 15:00	06/10/21 00:46	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		06/09/21 15:00	06/10/21 00:46	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		06/09/21 15:00	06/10/21 00:46	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		06/09/21 15:00	06/10/21 00:46	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		06/09/21 15:00	06/10/21 00:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			06/09/21 15:00	06/10/21 00:46	1
1,4-Difluorobenzene (Surr)	95		70 - 130			06/09/21 15:00	06/10/21 00:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 18:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 18:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 18:07	1
Total TPH	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 18:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130			06/09/21 09:31	06/09/21 18:07	1
o-Terphenyl	97		70 - 130			06/09/21 09:31	06/09/21 18:07	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	223		4.98	mg/Kg			06/10/21 17:48	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Client Sample ID: S-7, 0.5'

Lab Sample ID: 880-2861-10

Date Collected: 06/08/21 11:45

Matrix: Solid

Date Received: 06/08/21 16:29

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		06/09/21 15:00	06/10/21 01:06	1
Toluene	<0.00201	U	0.00201	mg/Kg		06/09/21 15:00	06/10/21 01:06	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		06/09/21 15:00	06/10/21 01:06	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		06/09/21 15:00	06/10/21 01:06	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		06/09/21 15:00	06/10/21 01:06	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		06/09/21 15:00	06/10/21 01:06	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		06/09/21 15:00	06/10/21 01:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	06/09/21 15:00	06/10/21 01:06	1
1,4-Difluorobenzene (Surr)	90		70 - 130	06/09/21 15:00	06/10/21 01:06	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 18:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 18:28	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 18:28	1
Total TPH	<49.9	U	49.9	mg/Kg		06/09/21 09:31	06/09/21 18:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	06/09/21 09:31	06/09/21 18:28	1
o-Terphenyl	93		70 - 130	06/09/21 09:31	06/09/21 18:28	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.0		4.98	mg/Kg			06/10/21 17:53	1

Eurofins Xenco, Midland

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
880-2823-A-21-E MS	Matrix Spike	104	99
880-2823-A-21-F MSD	Matrix Spike Duplicate	104	103
880-2861-1	S-1, 0.5'	149 S1+	103
880-2861-2	S-1, 1'	137 S1+	100
880-2861-3	S-2, 0.5'	125	106
880-2861-4	S-2, 1'	124	106
880-2861-5	S-3, 0.5'	135 S1+	104
880-2861-6	S-4, 0.5'	102	88
880-2861-7	S-4, 1'	97	80
880-2861-8	S-5, 0.5'	120	91
880-2861-9	S-6, 0.5'	116	95
880-2861-10	S-7, 0.5'	114	90
890-792-A-21-B MSD	Matrix Spike Duplicate	110	99
LCS 880-3909/1-A	Lab Control Sample	115	103
LCS 880-3911/1-A	Lab Control Sample	108	96
LCSD 880-3909/2-A	Lab Control Sample Dup	109	103
LCSD 880-3911/2-A	Lab Control Sample Dup	107	99
MB 880-3909/5-A	Method Blank	86	93
MB 880-3911/5-A	Method Blank	110	95

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	OTPH1
		(70-130)	(70-130)
880-2861-1	S-1, 0.5'	105	96
880-2861-2	S-1, 1'	114	111
880-2861-2 MS	S-1, 1'	92	77
880-2861-2 MSD	S-1, 1'	108	87
880-2861-3	S-2, 0.5'	115	111
880-2861-4	S-2, 1'	100	94
880-2861-5	S-3, 0.5'	104	96
880-2861-6	S-4, 0.5'	102	93
880-2861-7	S-4, 1'	104	101
880-2861-8	S-5, 0.5'	99	98
880-2861-9	S-6, 0.5'	98	97
880-2861-10	S-7, 0.5'	96	93
LCS 880-3917/2-A	Lab Control Sample	88	82
LCSD 880-3917/3-A	Lab Control Sample Dup	90	83
MB 880-3917/1-A	Method Blank	110	111

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3909/5-A

Matrix: Solid

Analysis Batch: 3916

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3909

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/09/21 08:34	06/09/21 13:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/09/21 08:34	06/09/21 13:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/09/21 08:34	06/09/21 13:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		06/09/21 08:34	06/09/21 13:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/09/21 08:34	06/09/21 13:28	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/09/21 08:34	06/09/21 13:28	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		06/09/21 08:34	06/09/21 13:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130	06/09/21 08:34	06/09/21 13:28	1
1,4-Difluorobenzene (Surr)	93		70 - 130	06/09/21 08:34	06/09/21 13:28	1

Lab Sample ID: LCS 880-3909/1-A

Matrix: Solid

Analysis Batch: 3916

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3909

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1060		mg/Kg		106	70 - 130
Toluene	0.100	0.1053		mg/Kg		105	70 - 130
Ethylbenzene	0.100	0.1088		mg/Kg		109	70 - 130
m-Xylene & p-Xylene	0.200	0.2323		mg/Kg		116	70 - 130
o-Xylene	0.100	0.1160		mg/Kg		116	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: LCSD 880-3909/2-A

Matrix: Solid

Analysis Batch: 3916

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3909

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1070		mg/Kg		107	70 - 130	1	35
Toluene	0.100	0.1042		mg/Kg		104	70 - 130	1	35
Ethylbenzene	0.100	0.1061		mg/Kg		106	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.2243		mg/Kg		112	70 - 130	4	35
o-Xylene	0.100	0.1116		mg/Kg		112	70 - 130	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 880-2823-A-21-E MS

Matrix: Solid

Analysis Batch: 3916

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 3909

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00198	U	0.100	0.08649		mg/Kg		86	70 - 130

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

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

Lab Sample ID: 880-2823-A-21-E MS

Matrix: Solid

Analysis Batch: 3916

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 3909

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00198	U	0.100	0.08445		mg/Kg		84	70 - 130
Ethylbenzene	<0.00198	U	0.100	0.08261		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00397	U	0.201	0.1696		mg/Kg		84	70 - 130
o-Xylene	<0.00198	U	0.100	0.08443		mg/Kg		84	70 - 130

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

Lab Sample ID: 880-2823-A-21-F MSD

Matrix: Solid

Analysis Batch: 3916

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 3909

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0990	0.08599		mg/Kg		87	70 - 130	1	35
Toluene	<0.00198	U	0.0990	0.08460		mg/Kg		85	70 - 130	0	35
Ethylbenzene	<0.00198	U	0.0990	0.08111		mg/Kg		82	70 - 130	2	35
m-Xylene & p-Xylene	<0.00397	U	0.198	0.1658		mg/Kg		84	70 - 130	2	35
o-Xylene	<0.00198	U	0.0990	0.08271		mg/Kg		84	70 - 130	2	35

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

Lab Sample ID: MB 880-3911/5-A

Matrix: Solid

Analysis Batch: 3913

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3911

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/09/21 15:45	06/09/21 17:21	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/09/21 15:45	06/09/21 17:21	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/09/21 15:45	06/09/21 17:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		06/09/21 15:45	06/09/21 17:21	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/09/21 15:45	06/09/21 17:21	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/09/21 15:45	06/09/21 17:21	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		06/09/21 15:45	06/09/21 17:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	06/09/21 15:45	06/09/21 17:21	1
1,4-Difluorobenzene (Surr)	95		70 - 130	06/09/21 15:45	06/09/21 17:21	1

Lab Sample ID: LCS 880-3911/1-A

Matrix: Solid

Analysis Batch: 3913

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3911

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07945		mg/Kg		79	70 - 130
Toluene	0.100	0.09493		mg/Kg		95	70 - 130

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

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

Lab Sample ID: LCS 880-3911/1-A

Matrix: Solid

Analysis Batch: 3913

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3911

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	0.100	0.1009		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	0.200	0.2055		mg/Kg		103	70 - 130
o-Xylene	0.100	0.1053		mg/Kg		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: LCSD 880-3911/2-A

Matrix: Solid

Analysis Batch: 3913

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3911

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.08466		mg/Kg		85	70 - 130	6	35
Toluene	0.100	0.09593		mg/Kg		96	70 - 130	1	35
Ethylbenzene	0.100	0.1015		mg/Kg		102	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2068		mg/Kg		103	70 - 130	1	35
o-Xylene	0.100	0.1058		mg/Kg		106	70 - 130	0	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 890-792-A-21-B MSD

Matrix: Solid

Analysis Batch: 3913

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 3911

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	<0.00200	U	0.100	0.08236		mg/Kg		82	70 - 130	15	35
Toluene	<0.00200	U	0.100	0.09142		mg/Kg		91	70 - 130	14	35
Ethylbenzene	<0.00200	U	0.100	0.09228		mg/Kg		92	70 - 130	17	35
m-Xylene & p-Xylene	<0.00399	U	0.201	0.1914		mg/Kg		95	70 - 130	17	35
o-Xylene	<0.00200	U	0.100	0.09500		mg/Kg		95	70 - 130	17	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

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

Lab Sample ID: MB 880-3917/1-A

Matrix: Solid

Analysis Batch: 3925

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3917

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/09/21 09:31	06/09/21 12:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/21 09:31	06/09/21 12:09	1

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

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

Lab Sample ID: MB 880-3917/1-A

Matrix: Solid

Analysis Batch: 3925

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3917

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/09/21 09:31	06/09/21 12:09	1
Total TPH	<50.0	U	50.0	mg/Kg		06/09/21 09:31	06/09/21 12:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130	06/09/21 09:31	06/09/21 12:09	1
o-Terphenyl	111		70 - 130	06/09/21 09:31	06/09/21 12:09	1

Lab Sample ID: LCS 880-3917/2-A

Matrix: Solid

Analysis Batch: 3925

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3917

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	804.1		mg/Kg		80	70 - 130
Diesel Range Organics (Over C10-C28)	1000	971.6		mg/Kg		97	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	82		70 - 130

Lab Sample ID: LCSD 880-3917/3-A

Matrix: Solid

Analysis Batch: 3925

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3917

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	804.0		mg/Kg		80	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	1000	992.5		mg/Kg		99	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	83		70 - 130

Lab Sample ID: 880-2861-2 MS

Matrix: Solid

Analysis Batch: 3925

Client Sample ID: S-1, 1'

Prep Type: Total/NA

Prep Batch: 3917

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	182		999	1046		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	179		999	926.6		mg/Kg		75	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	77		70 - 130

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

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

Lab Sample ID: 880-2861-2 MSD

Matrix: Solid

Analysis Batch: 3925

Client Sample ID: S-1, 1'

Prep Type: Total/NA

Prep Batch: 3917

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	182		998	1178		mg/Kg		100	70 - 130	12	20
Diesel Range Organics (Over C10-C28)	179		998	1090		mg/Kg		91	70 - 130	16	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	108		70 - 130								
o-Terphenyl	87		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3920/1-A

Matrix: Solid

Analysis Batch: 3947

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			06/10/21 16:30	1

Lab Sample ID: LCS 880-3920/2-A

Matrix: Solid

Analysis Batch: 3947

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	246.0		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-3920/3-A

Matrix: Solid

Analysis Batch: 3947

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	246.1		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 880-2861-10 MS

Matrix: Solid

Analysis Batch: 3947

Client Sample ID: S-7, 0.5'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	15.0		250	265.7		mg/Kg		100	90 - 110

Lab Sample ID: 880-2861-10 MSD

Matrix: Solid

Analysis Batch: 3947

Client Sample ID: S-7, 0.5'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	15.0		250	265.7		mg/Kg		100	90 - 110	0	20

Eurofins Xenco, Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

GC VOA

Prep Batch: 3909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2861-1	S-1, 0.5'	Total/NA	Solid	5035	
880-2861-2	S-1, 1'	Total/NA	Solid	5035	
880-2861-3	S-2, 0.5'	Total/NA	Solid	5035	
880-2861-4	S-2, 1'	Total/NA	Solid	5035	
880-2861-5	S-3, 0.5'	Total/NA	Solid	5035	
MB 880-3909/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3909/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3909/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-2823-A-21-E MS	Matrix Spike	Total/NA	Solid	5035	
880-2823-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 3911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2861-6	S-4, 0.5'	Total/NA	Solid	5035	
880-2861-7	S-4, 1'	Total/NA	Solid	5035	
880-2861-8	S-5, 0.5'	Total/NA	Solid	5035	
880-2861-9	S-6, 0.5'	Total/NA	Solid	5035	
880-2861-10	S-7, 0.5'	Total/NA	Solid	5035	
MB 880-3911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-792-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 3913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2861-6	S-4, 0.5'	Total/NA	Solid	8021B	3911
880-2861-7	S-4, 1'	Total/NA	Solid	8021B	3911
880-2861-8	S-5, 0.5'	Total/NA	Solid	8021B	3911
880-2861-9	S-6, 0.5'	Total/NA	Solid	8021B	3911
880-2861-10	S-7, 0.5'	Total/NA	Solid	8021B	3911
MB 880-3911/5-A	Method Blank	Total/NA	Solid	8021B	3911
LCS 880-3911/1-A	Lab Control Sample	Total/NA	Solid	8021B	3911
LCSD 880-3911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3911
890-792-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	3911

Analysis Batch: 3916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2861-1	S-1, 0.5'	Total/NA	Solid	8021B	3909
880-2861-2	S-1, 1'	Total/NA	Solid	8021B	3909
880-2861-3	S-2, 0.5'	Total/NA	Solid	8021B	3909
880-2861-4	S-2, 1'	Total/NA	Solid	8021B	3909
880-2861-5	S-3, 0.5'	Total/NA	Solid	8021B	3909
MB 880-3909/5-A	Method Blank	Total/NA	Solid	8021B	3909
LCS 880-3909/1-A	Lab Control Sample	Total/NA	Solid	8021B	3909
LCSD 880-3909/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3909
880-2823-A-21-E MS	Matrix Spike	Total/NA	Solid	8021B	3909
880-2823-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	3909

Eurofins Xenco, Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

GC Semi VOA

Prep Batch: 3917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2861-1	S-1, 0.5'	Total/NA	Solid	8015NM Prep	
880-2861-2	S-1, 1'	Total/NA	Solid	8015NM Prep	
880-2861-3	S-2, 0.5'	Total/NA	Solid	8015NM Prep	
880-2861-4	S-2, 1'	Total/NA	Solid	8015NM Prep	
880-2861-5	S-3, 0.5'	Total/NA	Solid	8015NM Prep	
880-2861-6	S-4, 0.5'	Total/NA	Solid	8015NM Prep	
880-2861-7	S-4, 1'	Total/NA	Solid	8015NM Prep	
880-2861-8	S-5, 0.5'	Total/NA	Solid	8015NM Prep	
880-2861-9	S-6, 0.5'	Total/NA	Solid	8015NM Prep	
880-2861-10	S-7, 0.5'	Total/NA	Solid	8015NM Prep	
MB 880-3917/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3917/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3917/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-2861-2 MS	S-1, 1'	Total/NA	Solid	8015NM Prep	
880-2861-2 MSD	S-1, 1'	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2861-1	S-1, 0.5'	Total/NA	Solid	8015B NM	3917
880-2861-2	S-1, 1'	Total/NA	Solid	8015B NM	3917
880-2861-3	S-2, 0.5'	Total/NA	Solid	8015B NM	3917
880-2861-4	S-2, 1'	Total/NA	Solid	8015B NM	3917
880-2861-5	S-3, 0.5'	Total/NA	Solid	8015B NM	3917
880-2861-6	S-4, 0.5'	Total/NA	Solid	8015B NM	3917
880-2861-7	S-4, 1'	Total/NA	Solid	8015B NM	3917
880-2861-8	S-5, 0.5'	Total/NA	Solid	8015B NM	3917
880-2861-9	S-6, 0.5'	Total/NA	Solid	8015B NM	3917
880-2861-10	S-7, 0.5'	Total/NA	Solid	8015B NM	3917
MB 880-3917/1-A	Method Blank	Total/NA	Solid	8015B NM	3917
LCS 880-3917/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3917
LCSD 880-3917/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3917
880-2861-2 MS	S-1, 1'	Total/NA	Solid	8015B NM	3917
880-2861-2 MSD	S-1, 1'	Total/NA	Solid	8015B NM	3917

HPLC/IC

Leach Batch: 3920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2861-1	S-1, 0.5'	Soluble	Solid	DI Leach	
880-2861-2	S-1, 1'	Soluble	Solid	DI Leach	
880-2861-3	S-2, 0.5'	Soluble	Solid	DI Leach	
880-2861-4	S-2, 1'	Soluble	Solid	DI Leach	
880-2861-5	S-3, 0.5'	Soluble	Solid	DI Leach	
880-2861-6	S-4, 0.5'	Soluble	Solid	DI Leach	
880-2861-7	S-4, 1'	Soluble	Solid	DI Leach	
880-2861-8	S-5, 0.5'	Soluble	Solid	DI Leach	
880-2861-9	S-6, 0.5'	Soluble	Solid	DI Leach	
880-2861-10	S-7, 0.5'	Soluble	Solid	DI Leach	
MB 880-3920/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3920/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3920/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Eurofins Xenco, Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

HPLC/IC (Continued)

Leach Batch: 3920 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2861-10 MS	S-7, 0.5'	Soluble	Solid	DI Leach	
880-2861-10 MSD	S-7, 0.5'	Soluble	Solid	DI Leach	

Analysis Batch: 3947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2861-1	S-1, 0.5'	Soluble	Solid	300.0	3920
880-2861-2	S-1, 1'	Soluble	Solid	300.0	3920
880-2861-3	S-2, 0.5'	Soluble	Solid	300.0	3920
880-2861-4	S-2, 1'	Soluble	Solid	300.0	3920
880-2861-5	S-3, 0.5'	Soluble	Solid	300.0	3920
880-2861-6	S-4, 0.5'	Soluble	Solid	300.0	3920
880-2861-7	S-4, 1'	Soluble	Solid	300.0	3920
880-2861-8	S-5, 0.5'	Soluble	Solid	300.0	3920
880-2861-9	S-6, 0.5'	Soluble	Solid	300.0	3920
880-2861-10	S-7, 0.5'	Soluble	Solid	300.0	3920
MB 880-3920/1-A	Method Blank	Soluble	Solid	300.0	3920
LCS 880-3920/2-A	Lab Control Sample	Soluble	Solid	300.0	3920
LCSD 880-3920/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3920
880-2861-10 MS	S-7, 0.5'	Soluble	Solid	300.0	3920
880-2861-10 MSD	S-7, 0.5'	Soluble	Solid	300.0	3920

Eurofins Xenco, Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Client Sample ID: S-1, 0.5'

Date Collected: 06/08/21 11:03

Date Received: 06/08/21 16:29

Lab Sample ID: 880-2861-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	3909	06/09/21 08:34	KL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	3916	06/09/21 19:58	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	3917	06/09/21 09:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3925	06/09/21 14:15	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3920	06/09/21 09:48	CH	XEN MID
Soluble	Analysis	300.0		1			3947	06/10/21 16:59	CH	XEN MID

Client Sample ID: S-1, 1'

Date Collected: 06/08/21 11:08

Date Received: 06/08/21 16:29

Lab Sample ID: 880-2861-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	3909	06/09/21 08:34	KL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	3916	06/09/21 20:18	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3917	06/09/21 09:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3925	06/09/21 13:12	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	3920	06/09/21 09:48	CH	XEN MID
Soluble	Analysis	300.0		1			3947	06/10/21 17:04	CH	XEN MID

Client Sample ID: S-2, 0.5'

Date Collected: 06/08/21 11:16

Date Received: 06/08/21 16:29

Lab Sample ID: 880-2861-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	3909	06/09/21 08:34	KL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	3916	06/09/21 20:39	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3917	06/09/21 09:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3925	06/09/21 14:36	AJ	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	3920	06/09/21 09:48	CH	XEN MID
Soluble	Analysis	300.0		1			3947	06/10/21 17:09	CH	XEN MID

Client Sample ID: S-2, 1'

Date Collected: 06/08/21 11:22

Date Received: 06/08/21 16:29

Lab Sample ID: 880-2861-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	3909	06/09/21 08:34	KL	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	3916	06/09/21 20:59	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3917	06/09/21 09:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3925	06/09/21 14:57	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	3920	06/09/21 09:48	CH	XEN MID
Soluble	Analysis	300.0		1			3947	06/10/21 17:14	CH	XEN MID

Eurofins Xenco, Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Client Sample ID: S-3, 0.5'

Date Collected: 06/08/21 11:27

Date Received: 06/08/21 16:29

Lab Sample ID: 880-2861-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	3909	06/09/21 08:34	KL	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	3916	06/09/21 21:19	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3917	06/09/21 09:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3925	06/09/21 15:18	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3920	06/09/21 09:48	CH	XEN MID
Soluble	Analysis	300.0		1			3947	06/10/21 17:29	CH	XEN MID

Client Sample ID: S-4, 0.5'

Date Collected: 06/08/21 11:30

Date Received: 06/08/21 16:29

Lab Sample ID: 880-2861-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	3911	06/09/21 15:00	MR	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	3913	06/10/21 01:26	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	3917	06/09/21 09:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3925	06/09/21 15:38	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	3920	06/09/21 09:48	CH	XEN MID
Soluble	Analysis	300.0		1			3947	06/10/21 17:33	CH	XEN MID

Client Sample ID: S-4, 1'

Date Collected: 06/08/21 11:33

Date Received: 06/08/21 16:29

Lab Sample ID: 880-2861-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	3911	06/09/21 15:00	MR	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	3913	06/10/21 01:47	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	3917	06/09/21 09:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3925	06/09/21 15:59	AJ	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	3920	06/09/21 09:48	CH	XEN MID
Soluble	Analysis	300.0		1			3947	06/10/21 17:38	CH	XEN MID

Client Sample ID: S-5, 0.5'

Date Collected: 06/08/21 11:36

Date Received: 06/08/21 16:29

Lab Sample ID: 880-2861-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	3911	06/09/21 15:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3913	06/10/21 00:25	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3917	06/09/21 09:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3925	06/09/21 17:46	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	3920	06/09/21 09:48	CH	XEN MID
Soluble	Analysis	300.0		1			3947	06/10/21 17:43	CH	XEN MID

Eurofins Xenco, Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Client Sample ID: S-6, 0.5'

Date Collected: 06/08/21 11:41

Date Received: 06/08/21 16:29

Lab Sample ID: 880-2861-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	3911	06/09/21 15:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3913	06/10/21 00:46	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3917	06/09/21 09:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3925	06/09/21 18:07	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3920	06/09/21 09:49	CH	XEN MID
Soluble	Analysis	300.0		1			3947	06/10/21 17:48	CH	XEN MID

Client Sample ID: S-7, 0.5'

Date Collected: 06/08/21 11:45

Date Received: 06/08/21 16:29

Lab Sample ID: 880-2861-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	3911	06/09/21 15:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3913	06/10/21 01:06	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3917	06/09/21 09:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3925	06/09/21 18:28	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3920	06/09/21 09:49	CH	XEN MID
Soluble	Analysis	300.0		1			3947	06/10/21 17:53	CH	XEN MID

Laboratory References:

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

Eurofins Xenco, Midland

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Laboratory: Eurofins Xenco, Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21
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
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (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.

Laboratory References:

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

Eurofins Xenco, Midland

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SND 1201

Job ID: 880-2861-1
SDG: 21-0100-17

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
880-2861-1	S-1, 0.5'	Solid	06/08/21 11:03	06/08/21 16:29	
880-2861-2	S-1, 1'	Solid	06/08/21 11:08	06/08/21 16:29	
880-2861-3	S-2, 0.5'	Solid	06/08/21 11:16	06/08/21 16:29	
880-2861-4	S-2, 1'	Solid	06/08/21 11:22	06/08/21 16:29	
880-2861-5	S-3, 0.5'	Solid	06/08/21 11:27	06/08/21 16:29	
880-2861-6	S-4, 0.5'	Solid	06/08/21 11:30	06/08/21 16:29	
880-2861-7	S-4, 1'	Solid	06/08/21 11:33	06/08/21 16:29	
880-2861-8	S-5, 0.5'	Solid	06/08/21 11:36	06/08/21 16:29	
880-2861-9	S-6, 0.5'	Solid	06/08/21 11:41	06/08/21 16:29	
880-2861-10	S-7, 0.5'	Solid	06/08/21 11:45	06/08/21 16:29	

Eurofins Xenco, Midland

Marson & Associates, Inc.

Environmental Consultants

507 N. Mc...
Midland, TX 79701
432-687-0901

880-2861 Chain of Custody



880-2861 No 1630

CHAIN-OF-CUSTODY

Data Reported to

PO#: 21-0100-17
PROJECT LOCATION OR NAME: 300 1201
LAB WORK ORDER#: 20479
COLLECTOR: 20479

PAGE 1 OF 1

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION				ANALYSES		FIELD NOTES
						HCl	HNO ₃	H ₂ SO ₄ ☐ NaOH ☐	ICE	UNPRESERVED		
S-1,0.5'		6/12/21	1103	S	1							
S-1,1'			1108									
S-2,0.5'			1116									
S-2,1'			1122									
S-3,0.5			1127									
S-4,0.5			1130									
S-4,1'			1133									
S-5,0.5			1136									
S-6,0.5			1141									
S-7,0.5			1145									
TOTAL					10							

RELINQUISHED BY (Signature) 6/18/21 1605 DATE/TIME 6/18/21 1605 RECEIVED BY (Signature) [Signature]

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

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

LABORATORY Kenice

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

LABORATORY USE ONLY:
RECEIVING TEMP 5.51 THERM# 128
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER BILL #
☒ HAND DELIVERED

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-2861-1

SDG Number: 21-0100-17

Login Number: 2861

List Number: 1

Creator: Phillips, Kerianna

List Source: Eurofins Xenco, 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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-5367-1

Laboratory Sample Delivery Group: 21-0100-17

Client Project/Site: Sand Dunes 11 CS

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:
8/31/2021 2:17:46 PM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS

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

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

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Laboratory Job ID: 880-5367-1
SDG: 21-0100-17

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Job ID: 880-5367-1**Laboratory: Eurofins Xenco, Midland****Narrative****Job Narrative
880-5367-1****Receipt**

The samples were received on 8/24/2021 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -2.6°C

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: S-3 5' (880-5367-15). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-6998 and analytical batch 880-7021 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-5423-A-1-E MSD). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: S-4 1' (880-5367-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-7029/1-A) and (LCSD 880-7029/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (CCV 880-7093/2), (CCV 880-7093/34), (890-1150-A-1-A MS) and (890-1150-A-1-B MSD). Evidence of matrix interferences is not obvious.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-7073 and analytical batch 880-7093 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: S-1 10' (880-5367-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-1154-A-1-E). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: S-1 5' (880-5367-7), S-1 10' (880-5367-8) and S-4 10' (880-5367-12). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The sample was reported with a detection in the diesel range organic hydrocarbons range even though the CCV was biased high. An additional analysis of the sample confirms the result and indicates it is not a false positive. S-4 10' (880-5367-12)

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

HPLC/IC

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-2 1'

Lab Sample ID: 880-5367-1

Date Collected: 08/23/21 14:04

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.100	U	0.100	mg/Kg		08/24/21 11:01	08/25/21 06:33	50
Toluene	0.340		0.100	mg/Kg		08/24/21 11:01	08/25/21 06:33	50
Ethylbenzene	0.750		0.100	mg/Kg		08/24/21 11:01	08/25/21 06:33	50
m,p-Xylenes	0.487		0.201	mg/Kg		08/24/21 11:01	08/25/21 06:33	50
o-Xylene	2.97		0.100	mg/Kg		08/24/21 11:01	08/25/21 06:33	50
Xylenes, Total	3.46		0.201	mg/Kg		08/24/21 11:01	08/25/21 06:33	50
Total BTEX	4.55		0.201	mg/Kg		08/24/21 11:01	08/25/21 06:33	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	150	S1+	70 - 130	08/24/21 11:01	08/25/21 06:33	50
1,4-Difluorobenzene (Surr)	93		70 - 130	08/24/21 11:01	08/25/21 06:33	50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	137		49.8	mg/Kg		08/25/21 09:30	08/25/21 16:33	1
Diesel Range Organics (Over C10-C28)	68.1		49.8	mg/Kg		08/25/21 09:30	08/25/21 16:33	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		08/25/21 09:30	08/25/21 16:33	1
Total TPH	205		49.8	mg/Kg		08/25/21 09:30	08/25/21 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	103		70 - 130	08/25/21 09:30	08/25/21 16:33	1
o-Terphenyl (Surr)	93		70 - 130	08/25/21 09:30	08/25/21 16:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.4		4.97	mg/Kg			08/25/21 18:36	1

Client Sample ID: S-2 3'

Lab Sample ID: 880-5367-2

Date Collected: 08/23/21 14:05

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.621		0.100	mg/Kg		08/24/21 11:01	08/25/21 06:53	50
Toluene	16.6		0.100	mg/Kg		08/24/21 11:01	08/25/21 06:53	50
Ethylbenzene	2.71		0.100	mg/Kg		08/24/21 11:01	08/25/21 06:53	50
m,p-Xylenes	17.5		0.201	mg/Kg		08/24/21 11:01	08/25/21 06:53	50
o-Xylene	4.89		0.100	mg/Kg		08/24/21 11:01	08/25/21 06:53	50
Xylenes, Total	22.4		0.201	mg/Kg		08/24/21 11:01	08/25/21 06:53	50
Total BTEX	42.3		0.201	mg/Kg		08/24/21 11:01	08/25/21 06:53	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	08/24/21 11:01	08/25/21 06:53	50
1,4-Difluorobenzene (Surr)	103		70 - 130	08/24/21 11:01	08/25/21 06:53	50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1610		50.0	mg/Kg		08/25/21 09:30	08/25/21 17:17	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-2 3'

Lab Sample ID: 880-5367-2

Date Collected: 08/23/21 14:05

Matrix: Solid

Date Received: 08/24/21 09:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	90.7		50.0	mg/Kg		08/25/21 09:30	08/25/21 17:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/25/21 09:30	08/25/21 17:17	1
Total TPH	1700		50.0	mg/Kg		08/25/21 09:30	08/25/21 17:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	99		70 - 130			08/25/21 09:30	08/25/21 17:17	1
o-Terphenyl (Surr)	90		70 - 130			08/25/21 09:30	08/25/21 17:17	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	50.5		4.99	mg/Kg			08/25/21 18:53	1

Client Sample ID: S-2 5'

Lab Sample ID: 880-5367-3

Date Collected: 08/23/21 14:06

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.543		0.100	mg/Kg		08/24/21 11:01	08/25/21 07:14	50
Toluene	19.0		0.100	mg/Kg		08/24/21 11:01	08/25/21 07:14	50
Ethylbenzene	4.70		0.100	mg/Kg		08/24/21 11:01	08/25/21 07:14	50
m,p-Xylenes	25.5		0.200	mg/Kg		08/24/21 11:01	08/25/21 07:14	50
o-Xylene	6.10		0.100	mg/Kg		08/24/21 11:01	08/25/21 07:14	50
Xylenes, Total	31.6		0.200	mg/Kg		08/24/21 11:01	08/25/21 07:14	50
Total BTEX	55.8		0.200	mg/Kg		08/24/21 11:01	08/25/21 07:14	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	161	S1+	70 - 130			08/24/21 11:01	08/25/21 07:14	50
1,4-Difluorobenzene (Surr)	130		70 - 130			08/24/21 11:01	08/25/21 07:14	50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	171		50.0	mg/Kg		08/25/21 09:30	08/25/21 17:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/25/21 09:30	08/25/21 17:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/25/21 09:30	08/25/21 17:38	1
Total TPH	171		50.0	mg/Kg		08/25/21 09:30	08/25/21 17:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	95		70 - 130			08/25/21 09:30	08/25/21 17:38	1
o-Terphenyl (Surr)	90		70 - 130			08/25/21 09:30	08/25/21 17:38	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73.3		4.95	mg/Kg			08/25/21 18:58	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-2 10'

Lab Sample ID: 880-5367-4

Date Collected: 08/23/21 14:07

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0996	U	0.0996	mg/Kg		08/24/21 11:01	08/25/21 07:35	50
Toluene	<0.0996	U	0.0996	mg/Kg		08/24/21 11:01	08/25/21 07:35	50
Ethylbenzene	<0.0996	U	0.0996	mg/Kg		08/24/21 11:01	08/25/21 07:35	50
m,p-Xylenes	0.208		0.199	mg/Kg		08/24/21 11:01	08/25/21 07:35	50
o-Xylene	<0.0996	U	0.0996	mg/Kg		08/24/21 11:01	08/25/21 07:35	50
Xylenes, Total	0.208		0.199	mg/Kg		08/24/21 11:01	08/25/21 07:35	50
Total BTEX	0.208		0.199	mg/Kg		08/24/21 11:01	08/25/21 07:35	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	08/24/21 11:01	08/25/21 07:35	50
1,4-Difluorobenzene (Surr)	80		70 - 130	08/24/21 11:01	08/25/21 07:35	50

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		08/25/21 09:30	08/25/21 18:00	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/25/21 09:30	08/25/21 18:00	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/25/21 09:30	08/25/21 18:00	1
Total TPH	<49.9	U	49.9	mg/Kg		08/25/21 09:30	08/25/21 18:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	96		70 - 130	08/25/21 09:30	08/25/21 18:00	1
o-Terphenyl (Surr)	92		70 - 130	08/25/21 09:30	08/25/21 18:00	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.0		5.04	mg/Kg			08/25/21 19:04	1

Client Sample ID: S-1 1'

Lab Sample ID: 880-5367-5

Date Collected: 08/23/21 14:14

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.285		0.0990	mg/Kg		08/24/21 11:01	08/25/21 07:56	50
Toluene	7.84		0.0990	mg/Kg		08/24/21 11:01	08/25/21 07:56	50
Ethylbenzene	2.18		0.0990	mg/Kg		08/24/21 11:01	08/25/21 07:56	50
m,p-Xylenes	10.8		0.198	mg/Kg		08/24/21 11:01	08/25/21 07:56	50
o-Xylene	3.19		0.0990	mg/Kg		08/24/21 11:01	08/25/21 07:56	50
Xylenes, Total	14.0		0.198	mg/Kg		08/24/21 11:01	08/25/21 07:56	50
Total BTEX	24.3		0.198	mg/Kg		08/24/21 11:01	08/25/21 07:56	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130	08/24/21 11:01	08/25/21 07:56	50
1,4-Difluorobenzene (Surr)	114		70 - 130	08/24/21 11:01	08/25/21 07:56	50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	514		49.9	mg/Kg		08/25/21 09:30	08/25/21 18:21	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-1 1'

Lab Sample ID: 880-5367-5

Date Collected: 08/23/21 14:14

Matrix: Solid

Date Received: 08/24/21 09:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	125		49.9	mg/Kg		08/25/21 09:30	08/25/21 18:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/25/21 09:30	08/25/21 18:21	1
Total TPH	639		49.9	mg/Kg		08/25/21 09:30	08/25/21 18:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	98		70 - 130			08/25/21 09:30	08/25/21 18:21	1
o-Terphenyl (Surr)	89		70 - 130			08/25/21 09:30	08/25/21 18:21	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	216		4.98	mg/Kg			08/25/21 19:10	1

Client Sample ID: S-1 3'

Lab Sample ID: 880-5367-6

Date Collected: 08/23/21 14:15

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.09		0.0990	mg/Kg		08/24/21 11:01	08/25/21 08:16	50
Toluene	8.42		0.101	mg/Kg		08/25/21 11:45	08/25/21 18:24	50
Ethylbenzene	7.54		0.0990	mg/Kg		08/24/21 11:01	08/25/21 08:16	50
m,p-Xylenes	8.99		0.202	mg/Kg		08/25/21 11:45	08/25/21 18:24	50
o-Xylene	9.87		0.0990	mg/Kg		08/24/21 11:01	08/25/21 08:16	50
Xylenes, Total	11.8		0.202	mg/Kg		08/25/21 11:45	08/25/21 18:24	50
Total BTEX	23.1		0.202	mg/Kg		08/25/21 11:45	08/25/21 18:24	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	150	S1+	70 - 130			08/24/21 11:01	08/25/21 08:16	50
1,4-Difluorobenzene (Surr)	109		70 - 130			08/24/21 11:01	08/25/21 08:16	50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	2480		49.8	mg/Kg		08/25/21 09:30	08/25/21 18:43	1
Diesel Range Organics (Over C10-C28)	144		49.8	mg/Kg		08/25/21 09:30	08/25/21 18:43	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		08/25/21 09:30	08/25/21 18:43	1
Total TPH	2620		49.8	mg/Kg		08/25/21 09:30	08/25/21 18:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	107		70 - 130			08/25/21 09:30	08/25/21 18:43	1
o-Terphenyl (Surr)	97		70 - 130			08/25/21 09:30	08/25/21 18:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.6		4.95	mg/Kg			08/25/21 19:26	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-1 5'

Lab Sample ID: 880-5367-7

Date Collected: 08/23/21 14:16

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	258		10.1	mg/Kg		08/27/21 11:30	08/27/21 21:58	5000
Toluene	807		10.1	mg/Kg		08/27/21 11:30	08/27/21 21:58	5000
Ethylbenzene	80.0		10.1	mg/Kg		08/27/21 11:30	08/27/21 21:58	5000
m,p-Xylenes	531		20.2	mg/Kg		08/27/21 11:30	08/27/21 21:58	5000
o-Xylene	104		10.1	mg/Kg		08/27/21 11:30	08/27/21 21:58	5000
Xylenes, Total	635		20.2	mg/Kg		08/27/21 11:30	08/27/21 21:58	5000
Total BTEX	1780		20.2	mg/Kg		08/27/21 11:30	08/27/21 21:58	5000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	08/27/21 11:30	08/27/21 21:58	5000
1,4-Difluorobenzene (Surr)	118		70 - 130	08/27/21 11:30	08/27/21 21:58	5000

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	16600		250	mg/Kg		08/25/21 09:30	08/25/21 19:04	5
Diesel Range Organics (Over C10-C28)	454		250	mg/Kg		08/25/21 09:30	08/25/21 19:04	5
Oil Range Organics (Over C28-C36)	<250	U	250	mg/Kg		08/25/21 09:30	08/25/21 19:04	5
Total TPH	17100		250	mg/Kg		08/25/21 09:30	08/25/21 19:04	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	125		70 - 130	08/25/21 09:30	08/25/21 19:04	5
o-Terphenyl (Surr)	117		70 - 130	08/25/21 09:30	08/25/21 19:04	5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.8		5.02	mg/Kg			08/25/21 19:32	1

Client Sample ID: S-1 10'

Lab Sample ID: 880-5367-8

Date Collected: 08/23/21 14:17

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	737		9.94	mg/Kg		08/27/21 11:30	08/27/21 22:24	5000
Toluene	39.6		0.502	mg/Kg		08/25/21 16:44	08/26/21 14:57	250
Ethylbenzene	100		0.502	mg/Kg		08/25/21 16:44	08/26/21 14:57	250
m,p-Xylenes	353		1.99	mg/Kg		08/25/21 15:20	08/27/21 06:14	500
o-Xylene	98.5		0.502	mg/Kg		08/25/21 16:44	08/26/21 14:57	250
Xylenes, Total	1320		19.9	mg/Kg		08/27/21 11:30	08/27/21 22:24	5000
Total BTEX	4040		19.9	mg/Kg		08/27/21 11:30	08/27/21 22:24	5000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	194	S1+	70 - 130	08/25/21 16:44	08/26/21 14:57	250
1,4-Difluorobenzene (Surr)	118		70 - 130	08/25/21 16:44	08/26/21 14:57	250

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	30500		250	mg/Kg		08/25/21 09:30	08/25/21 19:25	5

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-1 10'

Lab Sample ID: 880-5367-8

Date Collected: 08/23/21 14:17

Matrix: Solid

Date Received: 08/24/21 09:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	543		250	mg/Kg		08/25/21 09:30	08/25/21 19:25	5
Oil Range Organics (Over C28-C36)	<250	U	250	mg/Kg		08/25/21 09:30	08/25/21 19:25	5
Total TPH	31000		250	mg/Kg		08/25/21 09:30	08/25/21 19:25	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	115		70 - 130			08/25/21 09:30	08/25/21 19:25	5
o-Terphenyl (Surr)	89		70 - 130			08/25/21 09:30	08/25/21 19:25	5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20.3		4.98	mg/Kg			08/25/21 19:38	1

Client Sample ID: S-4 1'

Lab Sample ID: 880-5367-9

Date Collected: 08/23/21 14:26

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.84		0.200	mg/Kg		08/24/21 16:46	08/25/21 20:04	100
Toluene	11.1		0.200	mg/Kg		08/24/21 16:46	08/25/21 20:04	100
Ethylbenzene	2.49		0.200	mg/Kg		08/24/21 16:46	08/25/21 20:04	100
m,p-Xylenes	7.62		0.399	mg/Kg		08/24/21 16:46	08/25/21 20:04	100
o-Xylene	2.73		0.200	mg/Kg		08/24/21 16:46	08/25/21 20:04	100
Xylenes, Total	10.4		0.399	mg/Kg		08/24/21 16:46	08/25/21 20:04	100
Total BTEX	25.8		0.399	mg/Kg		08/24/21 16:46	08/25/21 20:04	100
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	154	S1+	70 - 130			08/24/21 16:46	08/25/21 20:04	100
1,4-Difluorobenzene (Surr)	106		70 - 130			08/24/21 16:46	08/25/21 20:04	100

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	211		49.8	mg/Kg		08/25/21 09:30	08/25/21 19:46	1
Diesel Range Organics (Over C10-C28)	106		49.8	mg/Kg		08/25/21 09:30	08/25/21 19:46	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		08/25/21 09:30	08/25/21 19:46	1
Total TPH	317		49.8	mg/Kg		08/25/21 09:30	08/25/21 19:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	104		70 - 130			08/25/21 09:30	08/25/21 19:46	1
o-Terphenyl (Surr)	94		70 - 130			08/25/21 09:30	08/25/21 19:46	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	121		4.99	mg/Kg			08/25/21 19:43	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-4 3'

Lab Sample ID: 880-5367-10

Date Collected: 08/23/21 14:27

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00240		0.00202	mg/Kg		08/24/21 15:00	08/25/21 00:02	1
Toluene	0.00840	F1	0.00202	mg/Kg		08/24/21 15:00	08/25/21 00:02	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		08/24/21 15:00	08/25/21 00:02	1
m,p-Xylenes	0.00555		0.00403	mg/Kg		08/24/21 15:00	08/25/21 00:02	1
o-Xylene	<0.00202	U F1	0.00202	mg/Kg		08/24/21 15:00	08/25/21 00:02	1
Xylenes, Total	0.00555		0.00403	mg/Kg		08/24/21 15:00	08/25/21 00:02	1
Total BTEX	0.0164		0.00403	mg/Kg		08/24/21 15:00	08/25/21 00:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130	08/24/21 15:00	08/25/21 00:02	1
1,4-Difluorobenzene (Surr)	98		70 - 130	08/24/21 15:00	08/25/21 00:02	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		08/25/21 09:30	08/25/21 20:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/25/21 09:30	08/25/21 20:07	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/25/21 09:30	08/25/21 20:07	1
Total TPH	<50.0	U	50.0	mg/Kg		08/25/21 09:30	08/25/21 20:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	93		70 - 130	08/25/21 09:30	08/25/21 20:07	1
o-Terphenyl (Surr)	92		70 - 130	08/25/21 09:30	08/25/21 20:07	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.9		5.02	mg/Kg			08/25/21 19:49	1

Client Sample ID: S-4 5'

Lab Sample ID: 880-5367-11

Date Collected: 08/23/21 14:28

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.380		0.199	mg/Kg		08/24/21 16:46	08/25/21 20:25	100
Toluene	4.34		0.199	mg/Kg		08/24/21 16:46	08/25/21 20:25	100
Ethylbenzene	1.98		0.199	mg/Kg		08/24/21 16:46	08/25/21 20:25	100
m,p-Xylenes	8.24		0.398	mg/Kg		08/24/21 16:46	08/25/21 20:25	100
o-Xylene	2.14		0.199	mg/Kg		08/24/21 16:46	08/25/21 20:25	100
Xylenes, Total	10.4		0.398	mg/Kg		08/24/21 16:46	08/25/21 20:25	100
Total BTEX	17.1		0.398	mg/Kg		08/24/21 16:46	08/25/21 20:25	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130	08/24/21 16:46	08/25/21 20:25	100
1,4-Difluorobenzene (Surr)	107		70 - 130	08/24/21 16:46	08/25/21 20:25	100

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	183		50.0	mg/Kg		08/25/21 09:30	08/25/21 20:28	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-4 5'

Lab Sample ID: 880-5367-11

Date Collected: 08/23/21 14:28

Matrix: Solid

Date Received: 08/24/21 09:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/25/21 09:30	08/25/21 20:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/25/21 09:30	08/25/21 20:28	1
Total TPH	183		50.0	mg/Kg		08/25/21 09:30	08/25/21 20:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	94		70 - 130			08/25/21 09:30	08/25/21 20:28	1
o-Terphenyl (Surr)	87		70 - 130			08/25/21 09:30	08/25/21 20:28	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23.7		5.05	mg/Kg			08/25/21 19:54	1

Client Sample ID: S-4 10'

Lab Sample ID: 880-5367-12

Date Collected: 08/23/21 14:29

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	131		1.01	mg/Kg		08/25/21 15:20	08/27/21 06:35	500
Toluene	563		9.96	mg/Kg		08/27/21 11:30	08/27/21 22:50	5000
Ethylbenzene	71.5		0.503	mg/Kg		08/25/21 16:44	08/26/21 15:17	250
m,p-Xylenes	264		2.02	mg/Kg		08/25/21 15:20	08/27/21 06:35	500
o-Xylene	69.9		0.503	mg/Kg		08/25/21 16:44	08/26/21 15:17	250
Xylenes, Total	438		19.9	mg/Kg		08/27/21 11:30	08/27/21 22:50	5000
Total BTEX	1230		19.9	mg/Kg		08/27/21 11:30	08/27/21 22:50	5000
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	158	S1+	70 - 130			08/25/21 16:44	08/26/21 15:17	250
1,4-Difluorobenzene (Surr)	105		70 - 130			08/25/21 16:44	08/26/21 15:17	250

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	27400		250	mg/Kg		08/24/21 15:52	08/25/21 07:10	5
Diesel Range Organics (Over C10-C28)	2980		250	mg/Kg		08/24/21 15:52	08/25/21 07:10	5
Oil Range Organics (Over C28-C36)	<250	U	250	mg/Kg		08/24/21 15:52	08/25/21 07:10	5
Total TPH	30400		250	mg/Kg		08/24/21 15:52	08/25/21 07:10	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	140	S1+	70 - 130			08/24/21 15:52	08/25/21 07:10	5
o-Terphenyl (Surr)	120		70 - 130			08/24/21 15:52	08/25/21 07:10	5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23.7		4.97	mg/Kg			08/25/21 20:11	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-3 1'

Lab Sample ID: 880-5367-13

Date Collected: 08/23/21 14:38

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0200	U	0.0200	mg/Kg		08/25/21 16:44	08/26/21 13:35	10
Toluene	<0.0200	U	0.0200	mg/Kg		08/25/21 16:44	08/26/21 13:35	10
Ethylbenzene	<0.0200	U	0.0200	mg/Kg		08/25/21 16:44	08/26/21 13:35	10
m,p-Xylenes	<0.0400	U	0.0400	mg/Kg		08/25/21 16:44	08/26/21 13:35	10
o-Xylene	<0.0200	U	0.0200	mg/Kg		08/25/21 16:44	08/26/21 13:35	10
Xylenes, Total	<0.0400	U	0.0400	mg/Kg		08/25/21 16:44	08/26/21 13:35	10
Total BTEX	<0.0400	U	0.0400	mg/Kg		08/25/21 16:44	08/26/21 13:35	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130	08/25/21 16:44	08/26/21 13:35	10
1,4-Difluorobenzene (Surr)	102		70 - 130	08/25/21 16:44	08/26/21 13:35	10

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		08/24/21 10:46	08/24/21 15:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/24/21 10:46	08/24/21 15:23	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/24/21 10:46	08/24/21 15:23	1
Total TPH	<49.9	U	49.9	mg/Kg		08/24/21 10:46	08/24/21 15:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	88		70 - 130	08/24/21 10:46	08/24/21 15:23	1
o-Terphenyl (Surr)	100		70 - 130	08/24/21 10:46	08/24/21 15:23	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	220		4.95	mg/Kg			08/25/21 20:17	1

Client Sample ID: S-3 3'

Lab Sample ID: 880-5367-14

Date Collected: 08/23/21 14:39

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/21 15:00	08/25/21 00:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/21 15:00	08/25/21 00:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/21 15:00	08/25/21 00:29	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		08/24/21 15:00	08/25/21 00:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/21 15:00	08/25/21 00:29	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/24/21 15:00	08/25/21 00:29	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/24/21 15:00	08/25/21 00:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130	08/24/21 15:00	08/25/21 00:29	1
1,4-Difluorobenzene (Surr)	88		70 - 130	08/24/21 15:00	08/25/21 00:29	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		08/24/21 10:46	08/24/21 15:45	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-3 3'

Lab Sample ID: 880-5367-14

Date Collected: 08/23/21 14:39

Matrix: Solid

Date Received: 08/24/21 09:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		08/24/21 10:46	08/24/21 15:45	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		08/24/21 10:46	08/24/21 15:45	1
Total TPH	<49.8	U	49.8	mg/Kg		08/24/21 10:46	08/24/21 15:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	83		70 - 130			08/24/21 10:46	08/24/21 15:45	1
o-Terphenyl (Surr)	94		70 - 130			08/24/21 10:46	08/24/21 15:45	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.3		4.96	mg/Kg			08/25/21 20:34	1

Client Sample ID: S-3 5'

Lab Sample ID: 880-5367-15

Date Collected: 08/23/21 14:40

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		08/24/21 15:00	08/25/21 00:56	1
Toluene	<0.00198	U	0.00198	mg/Kg		08/24/21 15:00	08/25/21 00:56	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		08/24/21 15:00	08/25/21 00:56	1
m,p-Xylenes	<0.00396	U	0.00396	mg/Kg		08/24/21 15:00	08/25/21 00:56	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		08/24/21 15:00	08/25/21 00:56	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		08/24/21 15:00	08/25/21 00:56	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		08/24/21 15:00	08/25/21 00:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	161	S1+	70 - 130			08/24/21 15:00	08/25/21 00:56	1
1,4-Difluorobenzene (Surr)	82		70 - 130			08/24/21 15:00	08/25/21 00:56	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		08/24/21 10:46	08/24/21 16:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/24/21 10:46	08/24/21 16:06	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/24/21 10:46	08/24/21 16:06	1
Total TPH	<49.9	U	49.9	mg/Kg		08/24/21 10:46	08/24/21 16:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	93		70 - 130			08/24/21 10:46	08/24/21 16:06	1
o-Terphenyl (Surr)	106		70 - 130			08/24/21 10:46	08/24/21 16:06	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.4		5.04	mg/Kg			08/25/21 20:39	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-3 4'

Lab Sample ID: 880-5367-16

Date Collected: 08/23/21 14:41

Matrix: Solid

Date Received: 08/24/21 09:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0146		0.00200	mg/Kg		08/24/21 10:45	08/24/21 16:04	1
Toluene	0.0225		0.00200	mg/Kg		08/24/21 10:45	08/24/21 16:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/21 10:45	08/24/21 16:04	1
m,p-Xylenes	0.00953		0.00399	mg/Kg		08/24/21 10:45	08/24/21 16:04	1
o-Xylene	0.00338		0.00200	mg/Kg		08/24/21 10:45	08/24/21 16:04	1
Xylenes, Total	0.0129		0.00399	mg/Kg		08/24/21 10:45	08/24/21 16:04	1
Total BTEX	0.0500		0.00399	mg/Kg		08/24/21 10:45	08/24/21 16:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	08/24/21 10:45	08/24/21 16:04	1
1,4-Difluorobenzene (Surr)	104		70 - 130	08/24/21 10:45	08/24/21 16:04	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		08/24/21 10:46	08/24/21 16:28	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		08/24/21 10:46	08/24/21 16:28	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		08/24/21 10:46	08/24/21 16:28	1
Total TPH	<49.8	U	49.8	mg/Kg		08/24/21 10:46	08/24/21 16:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	93		70 - 130	08/24/21 10:46	08/24/21 16:28	1
o-Terphenyl (Surr)	107		70 - 130	08/24/21 10:46	08/24/21 16:28	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.4		4.99	mg/Kg			08/25/21 20:45	1

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Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
880-5365-A-1-B MS	Matrix Spike	101	109
880-5365-A-1-C MSD	Matrix Spike Duplicate	108	102
880-5365-A-46-D MS	Matrix Spike	99	112
880-5365-A-46-E MSD	Matrix Spike Duplicate	99	97
880-5367-1	S-2 1'	150 S1+	93
880-5367-2	S-2 3'	109	103
880-5367-3	S-2 5'	161 S1+	130
880-5367-4	S-2 10'	101	80
880-5367-5	S-1 1'	127	114
880-5367-6	S-1 3'	150 S1+	109
880-5367-7	S-1 5'	111	118
880-5367-8	S-1 10'	194 S1+	118
880-5367-9	S-4 1'	154 S1+	106
880-5367-10	S-4 3'	116	98
880-5367-10 MS	S-4 3'	82	110
880-5367-10 MSD	S-4 3'	88	98
880-5367-11	S-4 5'	125	107
880-5367-12	S-4 10'	158 S1+	105
880-5367-13	S-3 1'	89	102
880-5367-14	S-3 3'	87	88
880-5367-15	S-3 5'	161 S1+	82
880-5367-16	S-3 4'	98	104
880-5415-A-1-A MS	Matrix Spike	129	93
880-5415-A-1-B MSD	Matrix Spike Duplicate	110	106
880-5423-A-1-D MS	Matrix Spike	110	105
880-5423-A-1-E MSD	Matrix Spike Duplicate	102	42 S1-
880-5484-A-6-B MS	Matrix Spike	112	123
880-5484-A-6-C MSD	Matrix Spike Duplicate	119	124
890-1150-A-1-A MS	Matrix Spike	115	108
890-1150-A-1-B MSD	Matrix Spike Duplicate	124	97
890-1154-A-1-C MS	Matrix Spike	115	106
890-1154-A-1-D MSD	Matrix Spike Duplicate	113	107
LCS 880-6993/1-A	Lab Control Sample	107	103
LCS 880-6997/1-A	Lab Control Sample	90	95
LCS 880-6998/1-A	Lab Control Sample	99	108
LCS 880-7029/1-A	Lab Control Sample	174 S1+	171 S1+
LCS 880-7058/1-A	Lab Control Sample	98	98
LCS 880-7073/1-A	Lab Control Sample	109	109
LCS 880-7083/1-A	Lab Control Sample	119	95
LCS 880-7146/1-A	Lab Control Sample	104	119
LCSD 880-6993/2-A	Lab Control Sample Dup	102	104
LCSD 880-6997/2-A	Lab Control Sample Dup	107	89
LCSD 880-6998/2-A	Lab Control Sample Dup	86	96
LCSD 880-7029/2-A	Lab Control Sample Dup	157 S1+	105
LCSD 880-7058/2-A	Lab Control Sample Dup	99	95
LCSD 880-7073/2-A	Lab Control Sample Dup	110	109
LCSD 880-7083/2-A	Lab Control Sample Dup	111	104
LCSD 880-7146/2-A	Lab Control Sample Dup	102	117
MB 880-6976/5-A	Method Blank	106	104

Eurofins Xenco, Midland

Surrogate Summary

Client: Larson & Associates, Inc.

Job ID: 880-5367-1

Project/Site: Sand Dunes 11 CS

SDG: 21-0100-17

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
MB 880-6993/5-A	Method Blank	120	112
MB 880-6997/5-A	Method Blank	110	98
MB 880-6998/5-A	Method Blank	69 S1-	96
MB 880-7029/5-A	Method Blank	97	102
MB 880-7058/5-A	Method Blank	122	108
MB 880-7073/5-A	Method Blank	108	99
MB 880-7083/5-A	Method Blank	109	98
MB 880-7146/5-A	Method Blank	71	103
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)
880-5361-A-1-D MS	Matrix Spike	88	90
880-5361-A-1-E MSD	Matrix Spike Duplicate	87	89
880-5367-1	S-2 1'	103	93
880-5367-2	S-2 3'	99	90
880-5367-3	S-2 5'	95	90
880-5367-4	S-2 10'	96	92
880-5367-5	S-1 1'	98	89
880-5367-6	S-1 3'	107	97
880-5367-7	S-1 5'	125	117
880-5367-8	S-1 10'	115	89
880-5367-9	S-4 1'	104	94
880-5367-10	S-4 3'	93	92
880-5367-11	S-4 5'	94	87
880-5367-12	S-4 10'	140 S1+	120
880-5367-13	S-3 1'	88	100
880-5367-14	S-3 3'	83	94
880-5367-15	S-3 5'	93	106
880-5367-16	S-3 4'	93	107
880-5415-A-1-E MS	Matrix Spike	84	78
880-5415-A-1-F MSD	Matrix Spike Duplicate	86	79
LCS 880-6994/2-A	Lab Control Sample	88	95
LCS 880-7041/2-A	Lab Control Sample	85	83
LCSD 880-6994/3-A	Lab Control Sample Dup	90	97
LCSD 880-7041/3-A	Lab Control Sample Dup	87	87
MB 880-6994/1-A	Method Blank	93	61 S1-
MB 880-7041/1-A	Method Blank	92	98
Surrogate Legend			
1CO = 1-Chlorooctane (Surr)			
OTPH = o-Terphenyl (Surr)			

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-6976/5-A

Matrix: Solid

Analysis Batch: 6977

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 6976

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/21 09:47	08/24/21 13:13	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/21 09:47	08/24/21 13:13	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/21 09:47	08/24/21 13:13	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		08/24/21 09:47	08/24/21 13:13	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/21 09:47	08/24/21 13:13	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/24/21 09:47	08/24/21 13:13	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/24/21 09:47	08/24/21 13:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	08/24/21 09:47	08/24/21 13:13	1
1,4-Difluorobenzene (Surr)	104		70 - 130	08/24/21 09:47	08/24/21 13:13	1

Lab Sample ID: MB 880-6993/5-A

Matrix: Solid

Analysis Batch: 6989

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 6993

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/21 10:45	08/24/21 14:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/21 10:45	08/24/21 14:14	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/21 10:45	08/24/21 14:14	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		08/24/21 10:45	08/24/21 14:14	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/21 10:45	08/24/21 14:14	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/24/21 10:45	08/24/21 14:14	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/24/21 10:45	08/24/21 14:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130	08/24/21 10:45	08/24/21 14:14	1
1,4-Difluorobenzene (Surr)	112		70 - 130	08/24/21 10:45	08/24/21 14:14	1

Lab Sample ID: LCS 880-6993/1-A

Matrix: Solid

Analysis Batch: 6989

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6993

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1093		mg/Kg		109	70 - 130
Toluene	0.100	0.1076		mg/Kg		108	70 - 130
Ethylbenzene	0.100	0.1075		mg/Kg		107	70 - 130
m,p-Xylenes	0.200	0.2019		mg/Kg		101	70 - 130
o-Xylene	0.100	0.1036		mg/Kg		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: LCSD 880-6993/2-A

Matrix: Solid

Analysis Batch: 6989

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 6993

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1183		mg/Kg		118	70 - 130	8	35
Toluene	0.100	0.1116		mg/Kg		112	70 - 130	4	35
Ethylbenzene	0.100	0.1105		mg/Kg		110	70 - 130	3	35
m,p-Xylenes	0.200	0.2036		mg/Kg		102	70 - 130	1	35
o-Xylene	0.100	0.1025		mg/Kg		103	70 - 130	1	35

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

Lab Sample ID: 880-5365-A-1-B MS

Matrix: Solid

Analysis Batch: 6989

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 6993

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00198	U	0.101	0.1156		mg/Kg		114	70 - 130
Toluene	<0.00198	U	0.101	0.1038		mg/Kg		103	70 - 130
Ethylbenzene	<0.00198	U	0.101	0.1003		mg/Kg		99	70 - 130
m,p-Xylenes	<0.00396	U	0.202	0.1833		mg/Kg		91	70 - 130
o-Xylene	<0.00198	U	0.101	0.09078		mg/Kg		89	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: 880-5365-A-1-C MSD

Matrix: Solid

Analysis Batch: 6989

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 6993

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0998	0.1177		mg/Kg		117	70 - 130	2	35
Toluene	<0.00198	U	0.0998	0.1115		mg/Kg		112	70 - 130	7	35
Ethylbenzene	<0.00198	U	0.0998	0.1118		mg/Kg		112	70 - 130	11	35
m,p-Xylenes	<0.00396	U	0.200	0.2035		mg/Kg		102	70 - 130	10	35
o-Xylene	<0.00198	U	0.0998	0.1009		mg/Kg		100	70 - 130	11	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: MB 880-6997/5-A

Matrix: Solid

Analysis Batch: 6977

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 6997

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/21 11:01	08/25/21 00:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/21 11:01	08/25/21 00:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/21 11:01	08/25/21 00:16	1

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: MB 880-6997/5-A

Matrix: Solid

Analysis Batch: 6977

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 6997

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		08/24/21 11:01	08/25/21 00:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/21 11:01	08/25/21 00:16	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/24/21 11:01	08/25/21 00:16	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/24/21 11:01	08/25/21 00:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	08/24/21 11:01	08/25/21 00:16	1
1,4-Difluorobenzene (Surr)	98		70 - 130	08/24/21 11:01	08/25/21 00:16	1

Lab Sample ID: LCS 880-6997/1-A

Matrix: Solid

Analysis Batch: 6977

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6997

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09505		mg/Kg		95	70 - 130
Toluene	0.100	0.08958		mg/Kg		90	70 - 130
Ethylbenzene	0.100	0.08449		mg/Kg		84	70 - 130
m,p-Xylenes	0.200	0.1528		mg/Kg		76	70 - 130
o-Xylene	0.100	0.07206		mg/Kg		72	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: LCSD 880-6997/2-A

Matrix: Solid

Analysis Batch: 6977

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 6997

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09740		mg/Kg		97	70 - 130	2	35
Toluene	0.100	0.09919		mg/Kg		99	70 - 130	10	35
Ethylbenzene	0.100	0.09754		mg/Kg		98	70 - 130	14	35
m,p-Xylenes	0.200	0.1789		mg/Kg		89	70 - 130	16	35
o-Xylene	0.100	0.08187		mg/Kg		82	70 - 130	13	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Lab Sample ID: 880-5365-A-46-D MS

Matrix: Solid

Analysis Batch: 6977

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 6997

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U F1	0.100	0.07650		mg/Kg		76	70 - 130
Toluene	<0.00200	U	0.100	0.08084		mg/Kg		81	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.07294		mg/Kg		73	70 - 130
m,p-Xylenes	<0.00400	U F1	0.201	0.1258	F1	mg/Kg		63	70 - 130

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: 880-5365-A-46-D MS

Matrix: Solid

Analysis Batch: 6977

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 6997

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	<0.00200	U F1	0.100	0.05994	F1	mg/Kg		60	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	99		70 - 130						
1,4-Difluorobenzene (Surr)	112		70 - 130						

Lab Sample ID: 880-5365-A-46-E MSD

Matrix: Solid

Analysis Batch: 6977

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 6997

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0998	0.06742	F1	mg/Kg		68	70 - 130	13	35
Toluene	<0.00200	U	0.0998	0.07935		mg/Kg		80	70 - 130	2	35
Ethylbenzene	<0.00200	U	0.0998	0.07532		mg/Kg		75	70 - 130	3	35
m,p-Xylenes	<0.00400	U F1	0.200	0.1394		mg/Kg		70	70 - 130	10	35
o-Xylene	<0.00200	U F1	0.0998	0.06651	F1	mg/Kg		67	70 - 130	10	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	99		70 - 130								
1,4-Difluorobenzene (Surr)	97		70 - 130								

Lab Sample ID: MB 880-6998/5-A

Matrix: Solid

Analysis Batch: 7021

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 6998

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/21 15:00	08/24/21 23:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/21 15:00	08/24/21 23:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/21 15:00	08/24/21 23:35	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		08/24/21 15:00	08/24/21 23:35	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/21 15:00	08/24/21 23:35	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/24/21 15:00	08/24/21 23:35	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/24/21 15:00	08/24/21 23:35	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac		
4-Bromofluorobenzene (Surr)	69	S1-	70 - 130	08/24/21 15:00	08/24/21 23:35	1		
1,4-Difluorobenzene (Surr)	96		70 - 130	08/24/21 15:00	08/24/21 23:35	1		

Lab Sample ID: LCS 880-6998/1-A

Matrix: Solid

Analysis Batch: 7021

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6998

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1063		mg/Kg		106	70 - 130
Toluene	0.100	0.09090		mg/Kg		91	70 - 130
Ethylbenzene	0.100	0.1051		mg/Kg		105	70 - 130
m,p-Xylenes	0.200	0.2103		mg/Kg		105	70 - 130
o-Xylene	0.100	0.1012		mg/Kg		101	70 - 130

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: LCSD 880-6998/2-A

Matrix: Solid

Analysis Batch: 7021

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 6998

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.08926		mg/Kg		89	70 - 130	17	35
Toluene	0.100	0.09527		mg/Kg		95	70 - 130	5	35
Ethylbenzene	0.100	0.09328		mg/Kg		93	70 - 130	12	35
m,p-Xylenes	0.200	0.1873		mg/Kg		94	70 - 130	12	35
o-Xylene	0.100	0.09006		mg/Kg		90	70 - 130	12	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	86		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 880-5367-10 MS

Matrix: Solid

Analysis Batch: 7021

Client Sample ID: S-4 3'

Prep Type: Total/NA

Prep Batch: 6998

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.00240		0.100	0.07632		mg/Kg		74	70 - 130		
Toluene	0.00840	F1	0.100	0.07585	F1	mg/Kg		67	70 - 130		
Ethylbenzene	<0.00202	U	0.100	0.07399		mg/Kg		73	70 - 130		
m,p-Xylenes	0.00555		0.200	0.1502		mg/Kg		72	70 - 130		
o-Xylene	<0.00202	U F1	0.100	0.06891	F1	mg/Kg		67	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	82		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: 880-5367-10 MSD

Matrix: Solid

Analysis Batch: 7021

Client Sample ID: S-4 3'

Prep Type: Total/NA

Prep Batch: 6998

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.00240		0.0998	0.07275		mg/Kg		70	70 - 130	5	35
Toluene	0.00840	F1	0.0998	0.08764		mg/Kg		79	70 - 130	14	35
Ethylbenzene	<0.00202	U	0.0998	0.07600		mg/Kg		75	70 - 130	3	35
m,p-Xylenes	0.00555		0.200	0.1563		mg/Kg		76	70 - 130	4	35
o-Xylene	<0.00202	U F1	0.0998	0.07442		mg/Kg		73	70 - 130	8	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: MB 880-7029/5-A

Matrix: Solid

Analysis Batch: 7042

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7029

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/24/21 16:46	08/25/21 12:54	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/24/21 16:46	08/25/21 12:54	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/24/21 16:46	08/25/21 12:54	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		08/24/21 16:46	08/25/21 12:54	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/24/21 16:46	08/25/21 12:54	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/24/21 16:46	08/25/21 12:54	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/24/21 16:46	08/25/21 12:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	08/24/21 16:46	08/25/21 12:54	1
1,4-Difluorobenzene (Surr)	102		70 - 130	08/24/21 16:46	08/25/21 12:54	1

Lab Sample ID: LCS 880-7029/1-A

Matrix: Solid

Analysis Batch: 7042

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08312		mg/Kg		83	70 - 130
Toluene	0.100	0.08842		mg/Kg		88	70 - 130
Ethylbenzene	0.100	0.1018		mg/Kg		102	70 - 130
m,p-Xylenes	0.200	0.2007		mg/Kg		100	70 - 130
o-Xylene	0.100	0.1089		mg/Kg		109	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	174	S1+	70 - 130
1,4-Difluorobenzene (Surr)	171	S1+	70 - 130

Lab Sample ID: LCSD 880-7029/2-A

Matrix: Solid

Analysis Batch: 7042

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 7029

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.08258		mg/Kg		83	70 - 130	1	35
Toluene	0.100	0.09095		mg/Kg		91	70 - 130	3	35
Ethylbenzene	0.100	0.1040		mg/Kg		104	70 - 130	2	35
m,p-Xylenes	0.200	0.2073		mg/Kg		104	70 - 130	3	35
o-Xylene	0.100	0.1125		mg/Kg		112	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	157	S1+	70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 880-5415-A-1-A MS

Matrix: Solid

Analysis Batch: 7042

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 7029

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U	0.0990	0.09910		mg/Kg		100	70 - 130

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: 880-5415-A-1-A MS

Matrix: Solid

Analysis Batch: 7042

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 7029

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00199	U	0.0990	0.08619		mg/Kg		87	70 - 130
Ethylbenzene	<0.00199	U	0.0990	0.08000		mg/Kg		81	70 - 130
m,p-Xylenes	<0.00398	U	0.198	0.1613		mg/Kg		81	70 - 130
o-Xylene	<0.00199	U	0.0990	0.08022		mg/Kg		81	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	129		70 - 130						
1,4-Difluorobenzene (Surr)	93		70 - 130						

Lab Sample ID: 880-5415-A-1-B MSD

Matrix: Solid

Analysis Batch: 7042

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 7029

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0994	0.08566		mg/Kg		86	70 - 130	15	35
Toluene	<0.00199	U	0.0994	0.07628		mg/Kg		77	70 - 130	12	35
Ethylbenzene	<0.00199	U	0.0994	0.07068		mg/Kg		71	70 - 130	12	35
m,p-Xylenes	<0.00398	U	0.199	0.1443		mg/Kg		73	70 - 130	11	35
o-Xylene	<0.00199	U	0.0994	0.07176		mg/Kg		72	70 - 130	11	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	110		70 - 130								
1,4-Difluorobenzene (Surr)	106		70 - 130								

Lab Sample ID: MB 880-7058/5-A

Matrix: Solid

Analysis Batch: 7060

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7058

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/25/21 11:45	08/25/21 14:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/25/21 11:45	08/25/21 14:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/25/21 11:45	08/25/21 14:52	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		08/25/21 11:45	08/25/21 14:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/25/21 11:45	08/25/21 14:52	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/25/21 11:45	08/25/21 14:52	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/25/21 11:45	08/25/21 14:52	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130			08/25/21 11:45	08/25/21 14:52	1
1,4-Difluorobenzene (Surr)	108		70 - 130			08/25/21 11:45	08/25/21 14:52	1

Lab Sample ID: LCS 880-7058/1-A

Matrix: Solid

Analysis Batch: 7060

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7058

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1071		mg/Kg		107	70 - 130
Toluene	0.100	0.1054		mg/Kg		105	70 - 130

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: LCS 880-7058/1-A

Matrix: Solid

Analysis Batch: 7060

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7058

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	0.100	0.1051		mg/Kg		105	70 - 130
m,p-Xylenes	0.200	0.1928		mg/Kg		96	70 - 130
o-Xylene	0.100	0.09927		mg/Kg		99	70 - 130

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

Lab Sample ID: LCSD 880-7058/2-A

Matrix: Solid

Analysis Batch: 7060

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 7058

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1125		mg/Kg		113	70 - 130	5	35
Toluene	0.100	0.1129		mg/Kg		113	70 - 130	7	35
Ethylbenzene	0.100	0.1113		mg/Kg		111	70 - 130	6	35
m,p-Xylenes	0.200	0.2022		mg/Kg		101	70 - 130	5	35
o-Xylene	0.100	0.1014		mg/Kg		101	70 - 130	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 880-5423-A-1-D MS

Matrix: Solid

Analysis Batch: 7060

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 7058

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.09135		mg/Kg		92	70 - 130
Toluene	<0.00200	U	0.0998	0.08347		mg/Kg		84	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.08350		mg/Kg		84	70 - 130
m,p-Xylenes	<0.00401	U	0.200	0.1553		mg/Kg		78	70 - 130
o-Xylene	<0.00200	U	0.0998	0.07783		mg/Kg		77	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 880-5423-A-1-E MSD

Matrix: Solid

Analysis Batch: 7060

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 7058

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0994	0.1007		mg/Kg		101	70 - 130	10	35
Toluene	<0.00200	U	0.0994	0.09545		mg/Kg		96	70 - 130	13	35
Ethylbenzene	<0.00200	U	0.0994	0.09085		mg/Kg		91	70 - 130	8	35
m,p-Xylenes	<0.00401	U	0.199	0.1649		mg/Kg		83	70 - 130	6	35
o-Xylene	<0.00200	U	0.0994	0.08230		mg/Kg		82	70 - 130	6	35

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	42	S1-	70 - 130

Lab Sample ID: MB 880-7073/5-A

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7073

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/25/21 15:20	08/26/21 22:43	1	
Toluene	<0.00200	U	0.00200	mg/Kg		08/25/21 15:20	08/26/21 22:43	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/25/21 15:20	08/26/21 22:43	1	
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		08/25/21 15:20	08/26/21 22:43	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/25/21 15:20	08/26/21 22:43	1	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/25/21 15:20	08/26/21 22:43	1	
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/25/21 15:20	08/26/21 22:43	1	

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil	Fac		
4-Bromofluorobenzene (Surr)	108		70 - 130	08/25/21 15:20	08/26/21 22:43	1			
1,4-Difluorobenzene (Surr)	99		70 - 130	08/25/21 15:20	08/26/21 22:43	1			

Lab Sample ID: LCS 880-7073/1-A

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7073

	Spike	LCS	LCS					%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	0.100	0.09681		mg/Kg		97	70 - 130		
Toluene	0.100	0.08816		mg/Kg		88	70 - 130		
Ethylbenzene	0.100	0.08481		mg/Kg		85	70 - 130		
m,p-Xylenes	0.200	0.1792		mg/Kg		90	70 - 130		
o-Xylene	0.100	0.09241		mg/Kg		92	70 - 130		

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

Lab Sample ID: LCSD 880-7073/2-A

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 7073

	Spike	LCSD	LCSD					%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1002		mg/Kg		100	70 - 130	3	35	
Toluene	0.100	0.09152		mg/Kg		92	70 - 130	4	35	
Ethylbenzene	0.100	0.08799		mg/Kg		88	70 - 130	4	35	
m,p-Xylenes	0.200	0.1813		mg/Kg		91	70 - 130	1	35	
o-Xylene	0.100	0.09117		mg/Kg		91	70 - 130	1	35	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: 890-1150-A-1-A MS

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 7073

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U F1 F2	0.0998	0.07433		mg/Kg		74	70 - 130
Toluene	<0.00200	U F1 F2	0.0998	0.06962		mg/Kg		70	70 - 130
Ethylbenzene	<0.00200	U F1 F2	0.0998	0.06819	F1	mg/Kg		68	70 - 130
m,p-Xylenes	<0.00399	U F1 F2	0.200	0.1445		mg/Kg		72	70 - 130
o-Xylene	<0.00200	U F1 F2	0.0998	0.07459		mg/Kg		75	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: 890-1150-A-1-B MSD

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 7073

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1 F2	0.101	0.02577	F1 F2	mg/Kg		26	70 - 130	97	35
Toluene	<0.00200	U F1 F2	0.101	0.02808	F1 F2	mg/Kg		28	70 - 130	85	35
Ethylbenzene	<0.00200	U F1 F2	0.101	0.03024	F1 F2	mg/Kg		30	70 - 130	77	35
m,p-Xylenes	<0.00399	U F1 F2	0.202	0.06843	F1 F2	mg/Kg		34	70 - 130	71	35
o-Xylene	<0.00200	U F1 F2	0.101	0.03933	F1 F2	mg/Kg		39	70 - 130	62	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	124		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: MB 880-7083/5-A

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7083

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/25/21 16:44	08/26/21 11:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/25/21 16:44	08/26/21 11:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/25/21 16:44	08/26/21 11:52	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		08/25/21 16:44	08/26/21 11:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/25/21 16:44	08/26/21 11:52	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/25/21 16:44	08/26/21 11:52	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/25/21 16:44	08/26/21 11:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	08/25/21 16:44	08/26/21 11:52	1
1,4-Difluorobenzene (Surr)	98		70 - 130	08/25/21 16:44	08/26/21 11:52	1

Lab Sample ID: LCS 880-7083/1-A

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7083

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1010		mg/Kg		101	70 - 130

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: LCS 880-7083/1-A

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7083

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	0.100	0.1027		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.1059		mg/Kg		106	70 - 130
m,p-Xylenes	0.200	0.2208		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1007		mg/Kg		101	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	119		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: LCSD 880-7083/2-A

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 7083

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08601		mg/Kg		86	70 - 130	16	35
Toluene	0.100	0.08076		mg/Kg		81	70 - 130	24	35
Ethylbenzene	0.100	0.07986		mg/Kg		80	70 - 130	28	35
m,p-Xylenes	0.200	0.1668		mg/Kg		83	70 - 130	28	35
o-Xylene	0.100	0.08252		mg/Kg		83	70 - 130	20	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 890-1154-A-1-C MS

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 7083

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.08819		mg/Kg		88	70 - 130
Toluene	<0.00200	U	0.0998	0.08412		mg/Kg		84	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.08191		mg/Kg		82	70 - 130
m,p-Xylenes	<0.00399	U	0.200	0.1718		mg/Kg		86	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08545		mg/Kg		86	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 890-1154-A-1-D MSD

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 7083

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.101	0.09075		mg/Kg		90	70 - 130	3	35
Toluene	<0.00200	U	0.101	0.08506		mg/Kg		84	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.101	0.08285		mg/Kg		82	70 - 130	1	35
m,p-Xylenes	<0.00399	U	0.202	0.1725		mg/Kg		86	70 - 130	0	35

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: 890-1154-A-1-D MSD

Matrix: Solid

Analysis Batch: 7093

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 7083

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
o-Xylene	<0.00200	U	0.101	0.08542		mg/Kg		85	70 - 130	0	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	113		70 - 130								
1,4-Difluorobenzene (Surr)	107		70 - 130								

Lab Sample ID: MB 880-7146/5-A

Matrix: Solid

Analysis Batch: 7183

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7146

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/26/21 15:44	08/27/21 18:33	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/26/21 15:44	08/27/21 18:33	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/26/21 15:44	08/27/21 18:33	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		08/26/21 15:44	08/27/21 18:33	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/26/21 15:44	08/27/21 18:33	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/26/21 15:44	08/27/21 18:33	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/26/21 15:44	08/27/21 18:33	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130			08/26/21 15:44	08/27/21 18:33	1
1,4-Difluorobenzene (Surr)	103		70 - 130			08/26/21 15:44	08/27/21 18:33	1

Lab Sample ID: LCS 880-7146/1-A

Matrix: Solid

Analysis Batch: 7183

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7146

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Benzene	0.100	0.1067		mg/Kg		107	70 - 130	
Toluene	0.100	0.1090		mg/Kg		109	70 - 130	
Ethylbenzene	0.100	0.1101		mg/Kg		110	70 - 130	
m,p-Xylenes	0.200	0.2207		mg/Kg		110	70 - 130	
o-Xylene	0.100	0.1059		mg/Kg		106	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)	104		70 - 130					
1,4-Difluorobenzene (Surr)	119		70 - 130					

Lab Sample ID: LCSD 880-7146/2-A

Matrix: Solid

Analysis Batch: 7183

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 7146

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1028		mg/Kg		103	70 - 130	4	35
Toluene	0.100	0.09447		mg/Kg		94	70 - 130	14	35
Ethylbenzene	0.100	0.1050		mg/Kg		105	70 - 130	5	35
m,p-Xylenes	0.200	0.2119		mg/Kg		106	70 - 130	4	35
o-Xylene	0.100	0.1033		mg/Kg		103	70 - 130	2	35

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	117		70 - 130

Lab Sample ID: 880-5484-A-6-B MS

Matrix: Solid

Analysis Batch: 7183

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 7146

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.08001		mg/Kg		80	70 - 130
Toluene	<0.00200	U	0.0998	0.08089		mg/Kg		81	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.08443		mg/Kg		85	70 - 130
m,p-Xylenes	<0.00399	U	0.200	0.1703		mg/Kg		85	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08328		mg/Kg		83	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	123		70 - 130

Lab Sample ID: 880-5484-A-6-C MSD

Matrix: Solid

Analysis Batch: 7183

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 7146

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.101	0.1008		mg/Kg		100	70 - 130	23	35
Toluene	<0.00200	U	0.101	0.09667		mg/Kg		96	70 - 130	18	35
Ethylbenzene	<0.00200	U	0.101	0.1046		mg/Kg		104	70 - 130	21	35
m,p-Xylenes	<0.00399	U	0.202	0.2111		mg/Kg		105	70 - 130	21	35
o-Xylene	<0.00200	U	0.101	0.1031		mg/Kg		102	70 - 130	21	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	119		70 - 130
1,4-Difluorobenzene (Surr)	124		70 - 130

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

Lab Sample ID: MB 880-6994/1-A

Matrix: Solid

Analysis Batch: 6980

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 6994

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		08/24/21 10:46	08/24/21 11:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/24/21 10:46	08/24/21 11:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/24/21 10:46	08/24/21 11:47	1
Total TPH	<50.0	U	50.0	mg/Kg		08/24/21 10:46	08/24/21 11:47	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane (Surr)	93		70 - 130	08/24/21 10:46	08/24/21 11:47	1		
o-Terphenyl (Surr)	61	S1-	70 - 130	08/24/21 10:46	08/24/21 11:47	1		

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: LCS 880-6994/2-A

Matrix: Solid

Analysis Batch: 6980

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6994

Analyte			Spike	LCS	LCS	Unit	D	%Rec.		
			Added	Result	Qualifier			Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	879.3		mg/Kg		88	70 - 130	
Diesel Range Organics (Over C10-C28)			1000	954.7		mg/Kg		95	70 - 130	

Lab Sample ID: LCSD 880-6994/3-A

Matrix: Solid

Analysis Batch: 6980

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 6994

			Spike	LCSD	LCSD				%Rec.			RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10			1000	896.6		mg/Kg		90	70 - 130	2	20	
Diesel Range Organics (Over C10-C28)			1000	965.5		mg/Kg		97	70 - 130	1	20	
			LCSD	LCSD								
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane (Surr)	90		70 - 130									
o-Terphenyl (Surr)	97		70 - 130									

Lab Sample ID: 880-5361-A-1-D MS

Matrix: Solid

Analysis Batch: 6980

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 6994

	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	995	838.6		mg/Kg		84	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	995	930.2		mg/Kg		93	70 - 130		
								</			

Lab Sample ID: 880-5361-A-1-E MSD

Matrix: Solid

Analysis Batch: 6980

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 6994

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	847.8		mg/Kg		85	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	921.8		mg/Kg		92	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane (Surr)	87		70 - 130								

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: 880-5361-A-1-E MSD

Matrix: Solid

Analysis Batch: 6980

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 6994

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	89		70 - 130

Lab Sample ID: MB 880-7041/1-A

Matrix: Solid

Analysis Batch: 7036

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7041

	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		08/25/21 09:30	08/25/21 11:32	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/25/21 09:30	08/25/21 11:32	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/25/21 09:30	08/25/21 11:32	1	
Total TPH	<50.0	U	50.0	mg/Kg		08/25/21 09:30	08/25/21 11:32	1	

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1-Chlorooctane (Surr)	92		70 - 130	08/25/21 09:30	08/25/21 11:32	1			
<i>o</i> -Terphenyl (Surr)	98		70 - 130	08/25/21 09:30	08/25/21 11:32	1			

Lab Sample ID: LCS 880-7041/2-A

Matrix: Solid

Analysis Batch: 7036

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7041

	Spike	LCS	LCS						
Analyte	Added	Result	Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	1000	809.8		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)	1000	869.1		mg/Kg		87	70 - 130		

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane (Surr)	85		70 - 130
<i>o</i> -Terphenyl (Surr)	83		70 - 130

Lab Sample ID: LCSD 880-7041/3-A

Matrix: Solid

Analysis Batch: 7036

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 7041

	Spike	LCSD	LCSD							
Analyte	Added	Result	Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	1000	802.9		mg/Kg		80	70 - 130	1	20	
Diesel Range Organics (Over C10-C28)	1000	893.2		mg/Kg		89	70 - 130	3	20	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane (Surr)	87		70 - 130
<i>o</i> -Terphenyl (Surr)	87		70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

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

Lab Sample ID: 880-5415-A-1-E MS

Matrix: Solid

Analysis Batch: 7036

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 7041

	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	995	870.9		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	995	789.4		mg/Kg		79	70 - 130		

Lab Sample ID: 880-5415-A-1-F MSD

Matrix: Solid

Analysis Batch: 7036

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 7041

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	929.7		mg/Kg		93	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	813.1		mg/Kg		81	70 - 130	3	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-6991/1-A

Matrix: Solid

Analysis Batch: 7072

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			08/25/21 18:19	1

Lab Sample ID: LCS 880-6991/2-A

Matrix: Solid

Analysis Batch: 7072

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	269.2		mg/Kg		108	90 - 110

Lab Sample ID: LCSD 880-6991/3-A

Matrix: Solid

Analysis Batch: 7072

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	269.5		mg/Kg		108	90 - 110	0	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-5367-1 MS

Matrix: Solid

Analysis Batch: 7072

Client Sample ID: S-2 1'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	25.4		249	282.3		mg/Kg		103	90 - 110		

Lab Sample ID: 880-5367-1 MSD

Matrix: Solid

Analysis Batch: 7072

Client Sample ID: S-2 1'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	25.4		249	282.4		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 880-5367-11 MS

Matrix: Solid

Analysis Batch: 7072

Client Sample ID: S-4 5'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	23.7		253	281.7		mg/Kg		102	90 - 110		

Lab Sample ID: 880-5367-11 MSD

Matrix: Solid

Analysis Batch: 7072

Client Sample ID: S-4 5'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	23.7		253	282.2		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

GC VOA

Prep Batch: 6976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-6976/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 6977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-1	S-2 1'	Total/NA	Solid	8021B	6997
880-5367-2	S-2 3'	Total/NA	Solid	8021B	6997
880-5367-3	S-2 5'	Total/NA	Solid	8021B	6997
880-5367-4	S-2 10'	Total/NA	Solid	8021B	6997
880-5367-5	S-1 1'	Total/NA	Solid	8021B	6997
880-5367-6	S-1 3'	Total/NA	Solid	8021B	6997
MB 880-6976/5-A	Method Blank	Total/NA	Solid	8021B	6976
MB 880-6997/5-A	Method Blank	Total/NA	Solid	8021B	6997
LCS 880-6997/1-A	Lab Control Sample	Total/NA	Solid	8021B	6997
LCSD 880-6997/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	6997
880-5365-A-46-D MS	Matrix Spike	Total/NA	Solid	8021B	6997
880-5365-A-46-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	6997

Analysis Batch: 6989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-16	S-3 4'	Total/NA	Solid	8021B	6993
MB 880-6993/5-A	Method Blank	Total/NA	Solid	8021B	6993
LCS 880-6993/1-A	Lab Control Sample	Total/NA	Solid	8021B	6993
LCSD 880-6993/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	6993
880-5365-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	6993
880-5365-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	6993

Prep Batch: 6993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-16	S-3 4'	Total/NA	Solid	5035	
MB 880-6993/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-6993/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-6993/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5365-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-5365-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 6997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-1	S-2 1'	Total/NA	Solid	5035	
880-5367-2	S-2 3'	Total/NA	Solid	5035	
880-5367-3	S-2 5'	Total/NA	Solid	5035	
880-5367-4	S-2 10'	Total/NA	Solid	5035	
880-5367-5	S-1 1'	Total/NA	Solid	5035	
880-5367-6	S-1 3'	Total/NA	Solid	5035	
MB 880-6997/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-6997/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-6997/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5365-A-46-D MS	Matrix Spike	Total/NA	Solid	5035	
880-5365-A-46-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Eurofins Xenco, Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

GC VOA

Prep Batch: 6998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-10	S-4 3'	Total/NA	Solid	5035	
880-5367-14	S-3 3'	Total/NA	Solid	5035	
880-5367-15	S-3 5'	Total/NA	Solid	5035	
MB 880-6998/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-6998/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-6998/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5367-10 MS	S-4 3'	Total/NA	Solid	5035	
880-5367-10 MSD	S-4 3'	Total/NA	Solid	5035	

Analysis Batch: 7021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-10	S-4 3'	Total/NA	Solid	8021B	6998
880-5367-14	S-3 3'	Total/NA	Solid	8021B	6998
880-5367-15	S-3 5'	Total/NA	Solid	8021B	6998
MB 880-6998/5-A	Method Blank	Total/NA	Solid	8021B	6998
LCS 880-6998/1-A	Lab Control Sample	Total/NA	Solid	8021B	6998
LCSD 880-6998/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	6998
880-5367-10 MS	S-4 3'	Total/NA	Solid	8021B	6998
880-5367-10 MSD	S-4 3'	Total/NA	Solid	8021B	6998

Prep Batch: 7029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-9	S-4 1'	Total/NA	Solid	5035	
880-5367-11	S-4 5'	Total/NA	Solid	5035	
MB 880-7029/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7029/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7029/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5415-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-5415-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 7042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-9	S-4 1'	Total/NA	Solid	8021B	7029
880-5367-11	S-4 5'	Total/NA	Solid	8021B	7029
MB 880-7029/5-A	Method Blank	Total/NA	Solid	8021B	7029
LCS 880-7029/1-A	Lab Control Sample	Total/NA	Solid	8021B	7029
LCSD 880-7029/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7029
880-5415-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	7029
880-5415-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7029

Prep Batch: 7058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-6	S-1 3'	Total/NA	Solid	5035	
MB 880-7058/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7058/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7058/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5423-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-5423-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Eurofins Xenco, Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

GC VOA

Analysis Batch: 7060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-6	S-1 3'	Total/NA	Solid	8021B	7058
MB 880-7058/5-A	Method Blank	Total/NA	Solid	8021B	7058
LCS 880-7058/1-A	Lab Control Sample	Total/NA	Solid	8021B	7058
LCSD 880-7058/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7058
880-5423-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	7058
880-5423-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7058

Prep Batch: 7073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-8	S-1 10'	Total/NA	Solid	5035	
880-5367-12	S-4 10'	Total/NA	Solid	5035	
MB 880-7073/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7073/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7073/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1150-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-1150-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 7083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-8	S-1 10'	Total/NA	Solid	5035	
880-5367-12	S-4 10'	Total/NA	Solid	5035	
880-5367-13	S-3 1'	Total/NA	Solid	5035	
MB 880-7083/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7083/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7083/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1154-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-1154-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 7093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-8	S-1 10'	Total/NA	Solid	8021B	7083
880-5367-8	S-1 10'	Total/NA	Solid	8021B	7073
880-5367-12	S-4 10'	Total/NA	Solid	8021B	7083
880-5367-12	S-4 10'	Total/NA	Solid	8021B	7073
880-5367-13	S-3 1'	Total/NA	Solid	8021B	7083
MB 880-7073/5-A	Method Blank	Total/NA	Solid	8021B	7073
MB 880-7083/5-A	Method Blank	Total/NA	Solid	8021B	7083
LCS 880-7073/1-A	Lab Control Sample	Total/NA	Solid	8021B	7073
LCS 880-7083/1-A	Lab Control Sample	Total/NA	Solid	8021B	7083
LCSD 880-7073/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7073
LCSD 880-7083/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7083
890-1150-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	7073
890-1150-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7073
890-1154-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	7083
890-1154-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7083

Prep Batch: 7146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-7	S-1 5'	Total/NA	Solid	5035	
880-5367-8	S-1 10'	Total/NA	Solid	5035	
880-5367-12	S-4 10'	Total/NA	Solid	5035	

Eurofins Xenco, Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

GC VOA (Continued)

Prep Batch: 7146 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-7146/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7146/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7146/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5484-A-6-B MS	Matrix Spike	Total/NA	Solid	5035	
880-5484-A-6-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 7183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-7	S-1 5'	Total/NA	Solid	8021B	7146
880-5367-8	S-1 10'	Total/NA	Solid	8021B	7146
880-5367-12	S-4 10'	Total/NA	Solid	8021B	7146
MB 880-7146/5-A	Method Blank	Total/NA	Solid	8021B	7146
LCS 880-7146/1-A	Lab Control Sample	Total/NA	Solid	8021B	7146
LCSD 880-7146/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7146
880-5484-A-6-B MS	Matrix Spike	Total/NA	Solid	8021B	7146
880-5484-A-6-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7146

GC Semi VOA

Analysis Batch: 6978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-12	S-4 10'	Total/NA	Solid	8015B NM	7022

Analysis Batch: 6980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-13	S-3 1'	Total/NA	Solid	8015B NM	6994
880-5367-14	S-3 3'	Total/NA	Solid	8015B NM	6994
880-5367-15	S-3 5'	Total/NA	Solid	8015B NM	6994
880-5367-16	S-3 4'	Total/NA	Solid	8015B NM	6994
MB 880-6994/1-A	Method Blank	Total/NA	Solid	8015B NM	6994
LCS 880-6994/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	6994
LCSD 880-6994/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	6994
880-5361-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	6994
880-5361-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	6994

Prep Batch: 6994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-13	S-3 1'	Total/NA	Solid	8015NM Prep	
880-5367-14	S-3 3'	Total/NA	Solid	8015NM Prep	
880-5367-15	S-3 5'	Total/NA	Solid	8015NM Prep	
880-5367-16	S-3 4'	Total/NA	Solid	8015NM Prep	
MB 880-6994/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-6994/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-6994/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-5361-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-5361-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 7022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-12	S-4 10'	Total/NA	Solid	8015NM Prep	

Eurofins Xenco, Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

GC Semi VOA

Analysis Batch: 7036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-1	S-2 1'	Total/NA	Solid	8015B NM	7041
880-5367-2	S-2 3'	Total/NA	Solid	8015B NM	7041
880-5367-3	S-2 5'	Total/NA	Solid	8015B NM	7041
880-5367-4	S-2 10'	Total/NA	Solid	8015B NM	7041
880-5367-5	S-1 1'	Total/NA	Solid	8015B NM	7041
880-5367-6	S-1 3'	Total/NA	Solid	8015B NM	7041
880-5367-7	S-1 5'	Total/NA	Solid	8015B NM	7041
880-5367-8	S-1 10'	Total/NA	Solid	8015B NM	7041
880-5367-9	S-4 1'	Total/NA	Solid	8015B NM	7041
880-5367-10	S-4 3'	Total/NA	Solid	8015B NM	7041
880-5367-11	S-4 5'	Total/NA	Solid	8015B NM	7041
MB 880-7041/1-A	Method Blank	Total/NA	Solid	8015B NM	7041
LCS 880-7041/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	7041
LCSD 880-7041/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	7041
880-5415-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	7041
880-5415-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	7041

Prep Batch: 7041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-1	S-2 1'	Total/NA	Solid	8015NM Prep	
880-5367-2	S-2 3'	Total/NA	Solid	8015NM Prep	
880-5367-3	S-2 5'	Total/NA	Solid	8015NM Prep	
880-5367-4	S-2 10'	Total/NA	Solid	8015NM Prep	
880-5367-5	S-1 1'	Total/NA	Solid	8015NM Prep	
880-5367-6	S-1 3'	Total/NA	Solid	8015NM Prep	
880-5367-7	S-1 5'	Total/NA	Solid	8015NM Prep	
880-5367-8	S-1 10'	Total/NA	Solid	8015NM Prep	
880-5367-9	S-4 1'	Total/NA	Solid	8015NM Prep	
880-5367-10	S-4 3'	Total/NA	Solid	8015NM Prep	
880-5367-11	S-4 5'	Total/NA	Solid	8015NM Prep	
MB 880-7041/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-7041/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-7041/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-5415-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-5415-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 6991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-1	S-2 1'	Soluble	Solid	DI Leach	
880-5367-2	S-2 3'	Soluble	Solid	DI Leach	
880-5367-3	S-2 5'	Soluble	Solid	DI Leach	
880-5367-4	S-2 10'	Soluble	Solid	DI Leach	
880-5367-5	S-1 1'	Soluble	Solid	DI Leach	
880-5367-6	S-1 3'	Soluble	Solid	DI Leach	
880-5367-7	S-1 5'	Soluble	Solid	DI Leach	
880-5367-8	S-1 10'	Soluble	Solid	DI Leach	
880-5367-9	S-4 1'	Soluble	Solid	DI Leach	
880-5367-10	S-4 3'	Soluble	Solid	DI Leach	
880-5367-11	S-4 5'	Soluble	Solid	DI Leach	

Eurofins Xenco, Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

HPLC/IC (Continued)

Leach Batch: 6991 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-12	S-4 10'	Soluble	Solid	DI Leach	
880-5367-13	S-3 1'	Soluble	Solid	DI Leach	
880-5367-14	S-3 3'	Soluble	Solid	DI Leach	
880-5367-15	S-3 5'	Soluble	Solid	DI Leach	
880-5367-16	S-3 4'	Soluble	Solid	DI Leach	
MB 880-6991/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-6991/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-6991/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-5367-1 MS	S-2 1'	Soluble	Solid	DI Leach	
880-5367-1 MSD	S-2 1'	Soluble	Solid	DI Leach	
880-5367-11 MS	S-4 5'	Soluble	Solid	DI Leach	
880-5367-11 MSD	S-4 5'	Soluble	Solid	DI Leach	

Analysis Batch: 7072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5367-1	S-2 1'	Soluble	Solid	300.0	6991
880-5367-2	S-2 3'	Soluble	Solid	300.0	6991
880-5367-3	S-2 5'	Soluble	Solid	300.0	6991
880-5367-4	S-2 10'	Soluble	Solid	300.0	6991
880-5367-5	S-1 1'	Soluble	Solid	300.0	6991
880-5367-6	S-1 3'	Soluble	Solid	300.0	6991
880-5367-7	S-1 5'	Soluble	Solid	300.0	6991
880-5367-8	S-1 10'	Soluble	Solid	300.0	6991
880-5367-9	S-4 1'	Soluble	Solid	300.0	6991
880-5367-10	S-4 3'	Soluble	Solid	300.0	6991
880-5367-11	S-4 5'	Soluble	Solid	300.0	6991
880-5367-12	S-4 10'	Soluble	Solid	300.0	6991
880-5367-13	S-3 1'	Soluble	Solid	300.0	6991
880-5367-14	S-3 3'	Soluble	Solid	300.0	6991
880-5367-15	S-3 5'	Soluble	Solid	300.0	6991
880-5367-16	S-3 4'	Soluble	Solid	300.0	6991
MB 880-6991/1-A	Method Blank	Soluble	Solid	300.0	6991
LCS 880-6991/2-A	Lab Control Sample	Soluble	Solid	300.0	6991
LCSD 880-6991/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	6991
880-5367-1 MS	S-2 1'	Soluble	Solid	300.0	6991
880-5367-1 MSD	S-2 1'	Soluble	Solid	300.0	6991
880-5367-11 MS	S-4 5'	Soluble	Solid	300.0	6991
880-5367-11 MSD	S-4 5'	Soluble	Solid	300.0	6991

Eurofins Xenco, Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-2 1'

Lab Sample ID: 880-5367-1

Date Collected: 08/23/21 14:04

Matrix: Solid

Date Received: 08/24/21 09:40

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	6997	08/24/21 11:01	KL	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	6977	08/25/21 06:33	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	7041	08/25/21 09:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7036	08/25/21 16:33	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 18:36	CH	XEN MID

Client Sample ID: S-2 3'

Lab Sample ID: 880-5367-2

Date Collected: 08/23/21 14:05

Matrix: Solid

Date Received: 08/24/21 09:40

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	6997	08/24/21 11:01	KL	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	6977	08/25/21 06:53	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	7041	08/25/21 09:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7036	08/25/21 17:17	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 18:53	CH	XEN MID

Client Sample ID: S-2 5'

Lab Sample ID: 880-5367-3

Date Collected: 08/23/21 14:06

Matrix: Solid

Date Received: 08/24/21 09:40

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	6997	08/24/21 11:01	KL	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	6977	08/25/21 07:14	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	7041	08/25/21 09:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7036	08/25/21 17:38	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 18:58	CH	XEN MID

Client Sample ID: S-2 10'

Lab Sample ID: 880-5367-4

Date Collected: 08/23/21 14:07

Matrix: Solid

Date Received: 08/24/21 09:40

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	6997	08/24/21 11:01	KL	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	6977	08/25/21 07:35	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	7041	08/25/21 09:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7036	08/25/21 18:00	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 19:04	CH	XEN MID

Eurofins Xenco, Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-1 1'

Lab Sample ID: 880-5367-5

Date Collected: 08/23/21 14:14

Matrix: Solid

Date Received: 08/24/21 09:40

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	6997	08/24/21 11:01	KL	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	6977	08/25/21 07:56	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	7041	08/25/21 09:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7036	08/25/21 18:21	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 19:10	CH	XEN MID

Client Sample ID: S-1 3'

Lab Sample ID: 880-5367-6

Date Collected: 08/23/21 14:15

Matrix: Solid

Date Received: 08/24/21 09:40

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	6997	08/24/21 11:01	KL	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	6977	08/25/21 08:16	KL	XEN MID
Total/NA	Prep	5035			4.96 g	5 mL	7058	08/25/21 11:45	MR	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	7060	08/25/21 18:24	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	7041	08/25/21 09:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7036	08/25/21 18:43	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 19:26	CH	XEN MID

Client Sample ID: S-1 5'

Lab Sample ID: 880-5367-7

Date Collected: 08/23/21 14:16

Matrix: Solid

Date Received: 08/24/21 09:40

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	7146	08/27/21 11:30	MR	XEN MID
Total/NA	Analysis	8021B		5000	5 mL	5 mL	7183	08/27/21 21:58	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	7041	08/25/21 09:30	DM	XEN MID
Total/NA	Analysis	8015B NM		5			7036	08/25/21 19:04	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 19:32	CH	XEN MID

Client Sample ID: S-1 10'

Lab Sample ID: 880-5367-8

Date Collected: 08/23/21 14:17

Matrix: Solid

Date Received: 08/24/21 09:40

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	7083	08/25/21 16:44	MR	XEN MID
Total/NA	Analysis	8021B		250	5 mL	5 mL	7093	08/26/21 14:57	MR	XEN MID
Total/NA	Prep	5035			5.03 g	5 mL	7073	08/25/21 15:20	MR	XEN MID
Total/NA	Analysis	8021B		500	5 mL	5 mL	7093	08/27/21 06:14	MR	XEN MID
Total/NA	Prep	5035			5.03 g	5 mL	7146	08/27/21 11:30	MR	XEN MID
Total/NA	Analysis	8021B		5000	5 mL	5 mL	7183	08/27/21 22:24	MR	XEN MID

Eurofins Xenco, Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-1 10'

Lab Sample ID: 880-5367-8

Date Collected: 08/23/21 14:17

Matrix: Solid

Date Received: 08/24/21 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	7041	08/25/21 09:30	DM	XEN MID
Total/NA	Analysis	8015B NM		5			7036	08/25/21 19:25	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 19:38	CH	XEN MID

Client Sample ID: S-4 1'

Lab Sample ID: 880-5367-9

Date Collected: 08/23/21 14:26

Matrix: Solid

Date Received: 08/24/21 09:40

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	7029	08/24/21 16:46	KL	XEN MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	7042	08/25/21 20:04	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	7041	08/25/21 09:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7036	08/25/21 19:46	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 19:43	CH	XEN MID

Client Sample ID: S-4 3'

Lab Sample ID: 880-5367-10

Date Collected: 08/23/21 14:27

Matrix: Solid

Date Received: 08/24/21 09:40

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	6998	08/24/21 15:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7021	08/25/21 00:02	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	7041	08/25/21 09:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7036	08/25/21 20:07	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 19:49	CH	XEN MID

Client Sample ID: S-4 5'

Lab Sample ID: 880-5367-11

Date Collected: 08/23/21 14:28

Matrix: Solid

Date Received: 08/24/21 09:40

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	7029	08/24/21 16:46	KL	XEN MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	7042	08/25/21 20:25	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	7041	08/25/21 09:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7036	08/25/21 20:28	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 19:54	CH	XEN MID

Eurofins Xenco, Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-4 10'

Lab Sample ID: 880-5367-12

Date Collected: 08/23/21 14:29

Matrix: Solid

Date Received: 08/24/21 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	7083	08/25/21 16:44	MR	XEN MID
Total/NA	Analysis	8021B		250	5 mL	5 mL	7093	08/26/21 15:17	MR	XEN MID
Total/NA	Prep	5035			4.96 g	5 mL	7073	08/25/21 15:20	MR	XEN MID
Total/NA	Analysis	8021B		500	5 mL	5 mL	7093	08/27/21 06:35	MR	XEN MID
Total/NA	Prep	5035			5.02 g	5 mL	7146	08/27/21 11:30	MR	XEN MID
Total/NA	Analysis	8021B		5000	5 mL	5 mL	7183	08/27/21 22:50	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	7022	08/24/21 15:52	DM	XEN MID
Total/NA	Analysis	8015B NM		5			6978	08/25/21 07:10	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 20:11	CH	XEN MID

Client Sample ID: S-3 1'

Lab Sample ID: 880-5367-13

Date Collected: 08/23/21 14:38

Matrix: Solid

Date Received: 08/24/21 09:40

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	7083	08/25/21 16:44	MR	XEN MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	7093	08/26/21 13:35	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	6994	08/24/21 10:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			6980	08/24/21 15:23	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 20:17	CH	XEN MID

Client Sample ID: S-3 3'

Lab Sample ID: 880-5367-14

Date Collected: 08/23/21 14:39

Matrix: Solid

Date Received: 08/24/21 09:40

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	6998	08/24/21 15:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7021	08/25/21 00:29	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	6994	08/24/21 10:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			6980	08/24/21 15:45	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 20:34	CH	XEN MID

Client Sample ID: S-3 5'

Lab Sample ID: 880-5367-15

Date Collected: 08/23/21 14:40

Matrix: Solid

Date Received: 08/24/21 09:40

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	6998	08/24/21 15:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7021	08/25/21 00:56	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	6994	08/24/21 10:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			6980	08/24/21 16:06	AJ	XEN MID

Eurofins Xenco, Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Client Sample ID: S-3 5'**Lab Sample ID: 880-5367-15****Date Collected: 08/23/21 14:40****Matrix: Solid****Date Received: 08/24/21 09:40**

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	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 20:39	CH	XEN MID

Client Sample ID: S-3 4'**Lab Sample ID: 880-5367-16****Date Collected: 08/23/21 14:41****Matrix: Solid****Date Received: 08/24/21 09:40**

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	6993	08/24/21 10:45	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	6989	08/24/21 16:04	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	6994	08/24/21 10:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			6980	08/24/21 16:28	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	6991	08/24/21 10:37	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 20:45	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Laboratory: Eurofins Xenco, Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	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
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (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.

Laboratory References:

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

Eurofins Xenco, Midland

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS

Job ID: 880-5367-1
SDG: 21-0100-17

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-5367-1	S-2 1'	Solid	08/23/21 14:04	08/24/21 09:40
880-5367-2	S-2 3'	Solid	08/23/21 14:05	08/24/21 09:40
880-5367-3	S-2 5'	Solid	08/23/21 14:06	08/24/21 09:40
880-5367-4	S-2 10'	Solid	08/23/21 14:07	08/24/21 09:40
880-5367-5	S-1 1'	Solid	08/23/21 14:14	08/24/21 09:40
880-5367-6	S-1 3'	Solid	08/23/21 14:15	08/24/21 09:40
880-5367-7	S-1 5'	Solid	08/23/21 14:16	08/24/21 09:40
880-5367-8	S-1 10'	Solid	08/23/21 14:17	08/24/21 09:40
880-5367-9	S-4 1'	Solid	08/23/21 14:26	08/24/21 09:40
880-5367-10	S-4 3'	Solid	08/23/21 14:27	08/24/21 09:40
880-5367-11	S-4 5'	Solid	08/23/21 14:28	08/24/21 09:40
880-5367-12	S-4 10'	Solid	08/23/21 14:29	08/24/21 09:40
880-5367-13	S-3 1'	Solid	08/23/21 14:38	08/24/21 09:40
880-5367-14	S-3 3'	Solid	08/23/21 14:39	08/24/21 09:40
880-5367-15	S-3 5'	Solid	08/23/21 14:40	08/24/21 09:40
880-5367-16	S-3 4'	Solid	08/23/21 14:41	08/24/21 09:40

880-5367 Chain of Custody.

10780

CUSTODY

MEMORANDUM

8/31/2021

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-5367-1

SDG Number: 21-0100-17

Login Number: 5367

List Number: 1

Creator: Teel, Brianna

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

Laboratory Job ID: 880-8242-1

Laboratory Sample Delivery Group: 21-0100-17

Client Project/Site: Sand Dunes 1201

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:
11/22/2021 11:12:58 AM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

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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: Sand Dunes 1201

Laboratory Job ID: 880-8242-1
SDG: 21-0100-17

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Job ID: 880-8242-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-8242-1

Receipt

The samples were received on 11/12/2021 9:08 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.9°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-11948 and analytical batch 880-12216 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-12224/3-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.

HPLC/IC

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Client Sample ID: S-1,15'

Lab Sample ID: 880-8242-1

Date Collected: 11/11/21 12:06

Matrix: Solid

Date Received: 11/12/21 09:08

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:32	1
Toluene	0.00325		0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:32	1
m,p-Xylenes	0.00573		0.00401	mg/Kg		11/12/21 10:30	11/12/21 15:32	1
o-Xylene	0.00269		0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:32	1
Xylenes, Total	0.00842		0.00401	mg/Kg		11/12/21 10:30	11/12/21 15:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	11/12/21 10:30	11/12/21 15:32	1
1,4-Difluorobenzene (Surr)	99		70 - 130	11/12/21 10:30	11/12/21 15:32	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0117		0.00401	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	54.0		50.0	mg/Kg			11/17/21 13:26	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		11/15/21 08:59	11/15/21 15:47	1
Diesel Range Organics (Over C10-C28)	54.0		50.0	mg/Kg		11/15/21 08:59	11/15/21 15:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/15/21 08:59	11/15/21 15:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	95		70 - 130			11/15/21 08:59	11/15/21 15:47	1
o-Terphenyl (Surr)	101		70 - 130			11/15/21 08:59	11/15/21 15:47	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.5		4.97	mg/Kg			11/20/21 20:03	1

Client Sample ID: S-1,20'

Lab Sample ID: 880-8242-2

Date Collected: 11/11/21 12:07

Matrix: Solid

Date Received: 11/12/21 09:08

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:52	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		11/12/21 10:30	11/12/21 15:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:52	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/12/21 10:30	11/12/21 15:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130	11/12/21 10:30	11/12/21 15:52	1
1,4-Difluorobenzene (Surr)	105		70 - 130	11/12/21 10:30	11/12/21 15:52	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Client Sample ID: S-1,20'

Lab Sample ID: 880-8242-2

Date Collected: 11/11/21 12:07

Matrix: Solid

Date Received: 11/12/21 09:08

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			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/17/21 13:26	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		11/15/21 08:59	11/15/21 16:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/15/21 08:59	11/15/21 16:09	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/15/21 08:59	11/15/21 16:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	106		70 - 130			11/15/21 08:59	11/15/21 16:09	1
o-Terphenyl (Surr)	110		70 - 130			11/15/21 08:59	11/15/21 16:09	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.7		5.02	mg/Kg			11/20/21 20:13	1

Client Sample ID: S-4,15'

Lab Sample ID: 880-8242-6

Date Collected: 11/11/21 13:21

Matrix: Solid

Date Received: 11/12/21 09:08

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/16/21 07:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/16/21 07:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/16/21 07:39	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		11/15/21 08:00	11/16/21 07:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/16/21 07:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/15/21 08:00	11/16/21 07:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130			11/15/21 08:00	11/16/21 07:39	1
1,4-Difluorobenzene (Surr)	115		70 - 130			11/15/21 08:00	11/16/21 07:39	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			11/18/21 16:13	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			11/17/21 13:26	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		11/15/21 08:59	11/15/21 16:31	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		11/15/21 08:59	11/15/21 16:31	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Client Sample ID: S-4,15'

Lab Sample ID: 880-8242-6

Date Collected: 11/11/21 13:21

Matrix: Solid

Date Received: 11/12/21 09:08

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)	<49.8	U	49.8	mg/Kg		11/15/21 08:59	11/15/21 16:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	114		70 - 130			11/15/21 08:59	11/15/21 16:31	1
o-Terphenyl (Surr)	122		70 - 130			11/15/21 08:59	11/15/21 16:31	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	47.0		5.00	mg/Kg			11/20/21 15:53	1

Client Sample ID: S-4,20'

Lab Sample ID: 880-8242-7

Date Collected: 11/11/21 13:22

Matrix: Solid

Date Received: 11/12/21 09:08

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		11/15/21 08:00	11/16/21 08:00	1
Toluene	<0.00199	U	0.00199	mg/Kg		11/15/21 08:00	11/16/21 08:00	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/15/21 08:00	11/16/21 08:00	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		11/15/21 08:00	11/16/21 08:00	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		11/15/21 08:00	11/16/21 08:00	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/15/21 08:00	11/16/21 08:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130			11/15/21 08:00	11/16/21 08:00	1
1,4-Difluorobenzene (Surr)	98		70 - 130			11/15/21 08:00	11/16/21 08:00	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			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			11/17/21 13:26	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		11/15/21 08:59	11/15/21 16:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/15/21 08:59	11/15/21 16:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/15/21 08:59	11/15/21 16:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	99		70 - 130			11/15/21 08:59	11/15/21 16:53	1
o-Terphenyl (Surr)	106		70 - 130			11/15/21 08:59	11/15/21 16:53	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.8		4.99	mg/Kg			11/20/21 16:25	1

Eurofins Xenco, Midland

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	BFB1	DFBZ1				
		(70-130)	(70-130)				
880-8081-A-57-F MS	Matrix Spike	121	102				
880-8081-A-57-G MSD	Matrix Spike Duplicate	146 S1+	102				
880-8242-1	S-1,15'	104	99				
880-8242-1 MS	S-1,15'	119	99				
880-8242-1 MSD	S-1,15'	106	98				
880-8242-2	S-1,20'	124	105				
880-8242-6	S-4,15'	132 S1+	115				
880-8242-7	S-4,20'	122	98				
LCS 880-11948/1-A	Lab Control Sample	123	100				
LCS 880-12117/1-A	Lab Control Sample	103	100				
LCSD 880-11948/2-A	Lab Control Sample Dup	124	107				
LCSD 880-12117/2-A	Lab Control Sample Dup	104	102				
MB 880-11948/5-A	Method Blank	123	99				
MB 880-12117/5-A	Method Blank	118	100				
MB 880-12208/5-A	Method Blank	125	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	OTPH1				
		(70-130)	(70-130)				
880-8242-1	S-1,15'	95	101				
880-8242-2	S-1,20'	106	110				
880-8242-6	S-4,15'	114	122				
880-8242-7	S-4,20'	99	106				
890-1570-A-1-F MS	Matrix Spike	103	99				
890-1570-A-1-G MSD	Matrix Spike Duplicate	112	109				
LCS 880-12224/2-A	Lab Control Sample	83	83				
LCSD 880-12224/3-A	Lab Control Sample Dup	156 S1+	161 S1+				
MB 880-12224/1-A	Method Blank	107	117				
Surrogate Legend							
1CO = 1-Chlorooctane (Surr)							
OTPH = o-Terphenyl (Surr)							

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11948/5-A

Matrix: Solid

Analysis Batch: 12216

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11948

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/15/21 23:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/15/21 23:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/15/21 23:35	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		11/15/21 08:00	11/15/21 23:35	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/15/21 23:35	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/15/21 08:00	11/15/21 23:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130	11/15/21 08:00	11/15/21 23:35	1
1,4-Difluorobenzene (Surr)	99		70 - 130	11/15/21 08:00	11/15/21 23:35	1

Lab Sample ID: LCS 880-11948/1-A

Matrix: Solid

Analysis Batch: 12216

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11948

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09809		mg/Kg		98	70 - 130
Toluene	0.100	0.1054		mg/Kg		105	70 - 130
Ethylbenzene	0.100	0.1030		mg/Kg		103	70 - 130
m,p-Xylenes	0.200	0.2070		mg/Kg		104	70 - 130
o-Xylene	0.100	0.1023		mg/Kg		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	123		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-11948/2-A

Matrix: Solid

Analysis Batch: 12216

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11948

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1011		mg/Kg		101	70 - 130	3	35
Toluene	0.100	0.09900		mg/Kg		99	70 - 130	6	35
Ethylbenzene	0.100	0.1049		mg/Kg		105	70 - 130	2	35
m,p-Xylenes	0.200	0.2020		mg/Kg		101	70 - 130	2	35
o-Xylene	0.100	0.1029		mg/Kg		103	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	124		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 880-8081-A-57-F MS

Matrix: Solid

Analysis Batch: 12216

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 11948

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U F2 F1	0.100	0.09766		mg/Kg		97	70 - 130
Toluene	<0.00199	U F2 F1	0.100	0.1025		mg/Kg		101	70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

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

Lab Sample ID: 880-8081-A-57-F MS

Matrix: Solid

Analysis Batch: 12216

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 11948

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00199	U F2 F1	0.100	0.1018		mg/Kg		101	70 - 130
m,p-Xylenes	<0.00398	U F2 F1	0.201	0.2016		mg/Kg		100	70 - 130
o-Xylene	<0.00199	U	0.100	0.09891		mg/Kg		98	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: 880-8081-A-57-G MSD

Matrix: Solid

Analysis Batch: 12216

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 11948

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F2 F1	0.0994	0.03888	F2 F1	mg/Kg		39	70 - 130	86	35
Toluene	<0.00199	U F2 F1	0.0994	0.06600	F2 F1	mg/Kg		66	70 - 130	43	35
Ethylbenzene	<0.00199	U F2 F1	0.0994	0.04647	F2 F1	mg/Kg		47	70 - 130	75	35
m,p-Xylenes	<0.00398	U F2 F1	0.199	0.1067	F2 F1	mg/Kg		54	70 - 130	62	35
o-Xylene	<0.00199	U	0.0994	0.08035		mg/Kg		80	70 - 130	21	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: MB 880-12117/5-A

Matrix: Solid

Analysis Batch: 12115

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 12117

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:03	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:03	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:03	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		11/12/21 10:30	11/12/21 15:03	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/12/21 10:30	11/12/21 15:03	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/12/21 10:30	11/12/21 15:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130	11/12/21 10:30	11/12/21 15:03	1
1,4-Difluorobenzene (Surr)	100		70 - 130	11/12/21 10:30	11/12/21 15:03	1

Lab Sample ID: LCS 880-12117/1-A

Matrix: Solid

Analysis Batch: 12115

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 12117

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07310		mg/Kg		73	70 - 130
Toluene	0.100	0.09837		mg/Kg		98	70 - 130
Ethylbenzene	0.100	0.1143		mg/Kg		114	70 - 130
m,p-Xylenes	0.200	0.1784		mg/Kg		89	70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

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

Lab Sample ID: LCS 880-12117/1-A

Matrix: Solid

Analysis Batch: 12115

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 12117

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	0.100	0.09017		mg/Kg		90	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-12117/2-A

Matrix: Solid

Analysis Batch: 12115

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 12117

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09388		mg/Kg		94	70 - 130	25	35
Toluene	0.100	0.09750		mg/Kg		98	70 - 130	1	35
Ethylbenzene	0.100	0.1049		mg/Kg		105	70 - 130	9	35
m,p-Xylenes	0.200	0.1961		mg/Kg		98	70 - 130	9	35
o-Xylene	0.100	0.09525		mg/Kg		95	70 - 130	5	35

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

Lab Sample ID: 880-8242-1 MS

Matrix: Solid

Analysis Batch: 12115

Client Sample ID: S-1,15'

Prep Type: Total/NA

Prep Batch: 12117

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.08578		mg/Kg		85	70 - 130
Toluene	0.00325		0.0998	0.09748		mg/Kg		94	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.09956		mg/Kg		98	70 - 130
m,p-Xylenes	0.00573		0.200	0.1941		mg/Kg		94	70 - 130
o-Xylene	0.00269		0.0998	0.09390		mg/Kg		91	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	119		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 880-8242-1 MSD

Matrix: Solid

Analysis Batch: 12115

Client Sample ID: S-1,15'

Prep Type: Total/NA

Prep Batch: 12117

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.08205		mg/Kg		81	70 - 130	4	35
Toluene	0.00325		0.0996	0.08639		mg/Kg		83	70 - 130	12	35
Ethylbenzene	<0.00200	U	0.0996	0.09276		mg/Kg		92	70 - 130	7	35
m,p-Xylenes	0.00573		0.199	0.1757		mg/Kg		85	70 - 130	10	35
o-Xylene	0.00269		0.0996	0.08560		mg/Kg		83	70 - 130	9	35

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

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

Lab Sample ID: 880-8242-1 MSD

Matrix: Solid

Analysis Batch: 12115

Client Sample ID: S-1,15'

Prep Type: Total/NA

Prep Batch: 12117

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: MB 880-12208/5-A

Matrix: Solid

Analysis Batch: 12216

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 12208

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/15/21 11:28	1	
Toluene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/15/21 11:28	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/15/21 11:28	1	
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		11/15/21 08:00	11/15/21 11:28	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/15/21 08:00	11/15/21 11:28	1	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/15/21 08:00	11/15/21 11:28	1	
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	125		70 - 130			11/15/21 08:00	11/15/21 11:28	1	
1,4-Difluorobenzene (Surr)	105		70 - 130			11/15/21 08:00	11/15/21 11:28	1	

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

Lab Sample ID: MB 880-12224/1-A

Matrix: Solid

Analysis Batch: 12235

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 12224

	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		11/15/21 08:59	11/15/21 11:55	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/15/21 08:59	11/15/21 11:55	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/15/21 08:59	11/15/21 11:55	1	
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane (Surr)	107		70 - 130			11/15/21 08:59	11/15/21 11:55	1	
o-Terphenyl (Surr)	117		70 - 130			11/15/21 08:59	11/15/21 11:55	1	

Lab Sample ID: LCS 880-12224/2-A

Matrix: Solid

Analysis Batch: 12235

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 12224

	Spike	LCS	LCS						
Analyte	Added	Result	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	920.3		mg/Kg		92	70 - 130		
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane (Surr)	83		70 - 130						
o-Terphenyl (Surr)	83		70 - 130						

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

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

Lab Sample ID: LCSD 880-12224/3-A

Matrix: Solid

Analysis Batch: 12235

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 12224

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1261		mg/Kg		126	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	1000	1118		mg/Kg		112	70 - 130	19	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane (Surr)	156	S1+	70 - 130						
o-Terphenyl (Surr)	161	S1+	70 - 130						

Lab Sample ID: 890-1570-A-1-F MS

Matrix: Solid

Analysis Batch: 12235

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 12224

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	<49.9	U F1	997	1596	F1	mg/Kg		160	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1020		mg/Kg		100	70 - 130		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1-Chlorooctane (Surr)	103		70 - 130								
o-Terphenyl (Surr)	99		70 - 130								

Lab Sample ID: 890-1570-A-1-G MSD

Matrix: Solid

Analysis Batch: 12235

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 12224

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	998	1762	F1	mg/Kg		177	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1114		mg/Kg		110	70 - 130	9	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane (Surr)	112		70 - 130								
o-Terphenyl (Surr)	109		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-12273/1-A

Matrix: Solid

Analysis Batch: 12843

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			11/20/21 14:25	1

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-12273/2-A

Matrix: Solid

Analysis Batch: 12843

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	243.5		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-12273/3-A

Matrix: Solid

Analysis Batch: 12843

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	244.4		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 880-8242-6 MS

Matrix: Solid

Analysis Batch: 12843

Client Sample ID: S-4,15'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	47.0		250	289.7		mg/Kg		97	90 - 110		

Lab Sample ID: 880-8242-6 MSD

Matrix: Solid

Analysis Batch: 12843

Client Sample ID: S-4,15'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	47.0		250	296.9		mg/Kg		100	90 - 110	2	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

GC VOA

Prep Batch: 11948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8242-6	S-4,15'	Total/NA	Solid	5035	
880-8242-7	S-4,20'	Total/NA	Solid	5035	
MB 880-11948/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11948/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11948/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-8081-A-57-F MS	Matrix Spike	Total/NA	Solid	5035	
880-8081-A-57-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 12115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8242-1	S-1,15'	Total/NA	Solid	8021B	12117
880-8242-2	S-1,20'	Total/NA	Solid	8021B	12117
MB 880-12117/5-A	Method Blank	Total/NA	Solid	8021B	12117
LCS 880-12117/1-A	Lab Control Sample	Total/NA	Solid	8021B	12117
LCSD 880-12117/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	12117
880-8242-1 MS	S-1,15'	Total/NA	Solid	8021B	12117
880-8242-1 MSD	S-1,15'	Total/NA	Solid	8021B	12117

Prep Batch: 12117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8242-1	S-1,15'	Total/NA	Solid	5035	
880-8242-2	S-1,20'	Total/NA	Solid	5035	
MB 880-12117/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-12117/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-12117/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-8242-1 MS	S-1,15'	Total/NA	Solid	5035	
880-8242-1 MSD	S-1,15'	Total/NA	Solid	5035	

Prep Batch: 12208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-12208/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 12216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8242-6	S-4,15'	Total/NA	Solid	8021B	11948
880-8242-7	S-4,20'	Total/NA	Solid	8021B	11948
MB 880-11948/5-A	Method Blank	Total/NA	Solid	8021B	11948
MB 880-12208/5-A	Method Blank	Total/NA	Solid	8021B	12208
LCS 880-11948/1-A	Lab Control Sample	Total/NA	Solid	8021B	11948
LCSD 880-11948/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11948
880-8081-A-57-F MS	Matrix Spike	Total/NA	Solid	8021B	11948
880-8081-A-57-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11948

Analysis Batch: 12693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8242-1	S-1,15'	Total/NA	Solid	Total BTEX	
880-8242-2	S-1,20'	Total/NA	Solid	Total BTEX	
880-8242-6	S-4,15'	Total/NA	Solid	Total BTEX	
880-8242-7	S-4,20'	Total/NA	Solid	Total BTEX	

Eurofins Xenco, Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

GC Semi VOA

Prep Batch: 12224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8242-1	S-1,15'	Total/NA	Solid	8015NM Prep	
880-8242-2	S-1,20'	Total/NA	Solid	8015NM Prep	
880-8242-6	S-4,15'	Total/NA	Solid	8015NM Prep	
880-8242-7	S-4,20'	Total/NA	Solid	8015NM Prep	
MB 880-12224/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-12224/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-12224/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1570-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1570-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 12235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8242-1	S-1,15'	Total/NA	Solid	8015B NM	12224
880-8242-2	S-1,20'	Total/NA	Solid	8015B NM	12224
880-8242-6	S-4,15'	Total/NA	Solid	8015B NM	12224
880-8242-7	S-4,20'	Total/NA	Solid	8015B NM	12224
MB 880-12224/1-A	Method Blank	Total/NA	Solid	8015B NM	12224
LCS 880-12224/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	12224
LCSD 880-12224/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	12224
890-1570-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	12224
890-1570-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	12224

Analysis Batch: 12574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8242-1	S-1,15'	Total/NA	Solid	8015 NM	
880-8242-2	S-1,20'	Total/NA	Solid	8015 NM	
880-8242-6	S-4,15'	Total/NA	Solid	8015 NM	
880-8242-7	S-4,20'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 12273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8242-1	S-1,15'	Soluble	Solid	DI Leach	
880-8242-2	S-1,20'	Soluble	Solid	DI Leach	
880-8242-6	S-4,15'	Soluble	Solid	DI Leach	
880-8242-7	S-4,20'	Soluble	Solid	DI Leach	
MB 880-12273/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-12273/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-12273/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-8242-6 MS	S-4,15'	Soluble	Solid	DI Leach	
880-8242-6 MSD	S-4,15'	Soluble	Solid	DI Leach	

Analysis Batch: 12843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8242-1	S-1,15'	Soluble	Solid	300.0	12273
880-8242-2	S-1,20'	Soluble	Solid	300.0	12273
880-8242-6	S-4,15'	Soluble	Solid	300.0	12273
880-8242-7	S-4,20'	Soluble	Solid	300.0	12273
MB 880-12273/1-A	Method Blank	Soluble	Solid	300.0	12273
LCS 880-12273/2-A	Lab Control Sample	Soluble	Solid	300.0	12273

Eurofins Xenco, Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

HPLC/IC (Continued)

Analysis Batch: 12843 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-12273/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	12273
880-8242-6 MS	S-4,15'	Soluble	Solid	300.0	12273
880-8242-6 MSD	S-4,15'	Soluble	Solid	300.0	12273

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Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Client Sample ID: S-1,15'

Lab Sample ID: 880-8242-1

Date Collected: 11/11/21 12:06

Matrix: Solid

Date Received: 11/12/21 09:08

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	12117	11/12/21 10:30	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12115	11/12/21 15:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	12224	11/15/21 08:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12235	11/15/21 15:47	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	12273	11/15/21 10:45	CA	XEN MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	12843	11/20/21 20:03	CH	XEN MID

Client Sample ID: S-1,20'

Lab Sample ID: 880-8242-2

Date Collected: 11/11/21 12:07

Matrix: Solid

Date Received: 11/12/21 09:08

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	12117	11/12/21 10:30	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12115	11/12/21 15:52	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	12224	11/15/21 08:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12235	11/15/21 16:09	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	12273	11/15/21 10:45	CA	XEN MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	12843	11/20/21 20:13	CH	XEN MID

Client Sample ID: S-4,15'

Lab Sample ID: 880-8242-6

Date Collected: 11/11/21 13:21

Matrix: Solid

Date Received: 11/12/21 09:08

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	11948	11/15/21 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12216	11/16/21 07:39	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	12224	11/15/21 08:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12235	11/15/21 16:31	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	12273	11/15/21 10:45	CA	XEN MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	12843	11/20/21 15:53	CH	XEN MID

Client Sample ID: S-4,20'

Lab Sample ID: 880-8242-7

Date Collected: 11/11/21 13:22

Matrix: Solid

Date Received: 11/12/21 09:08

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	11948	11/15/21 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12216	11/16/21 08:00	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID

Eurofins Xenco, Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Client Sample ID: S-4,20'
Date Collected: 11/11/21 13:22
Date Received: 11/12/21 09:08

Lab Sample ID: 880-8242-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	12224	11/15/21 08:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12235	11/15/21 16:53	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	12273	11/15/21 10:45	CA	XEN MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	12843	11/20/21 16:25	CH	XEN MID

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Laboratory: Eurofins Xenco, 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: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

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 Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Xenco, Midland

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 1201

Job ID: 880-8242-1
SDG: 21-0100-17

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-8242-1	S-1,15'	Solid	11/11/21 12:06	11/12/21 09:08
880-8242-2	S-1,20'	Solid	11/11/21 12:07	11/12/21 09:08
880-8242-6	S-4,15'	Solid	11/11/21 13:21	11/12/21 09:08
880-8242-7	S-4,20'	Solid	11/11/21 13:22	11/12/21 09:08

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Marson & Associates, Inc.
Environmental Consultants

880-8242 Chain of Custody
Midland TX 79701
432-687 0901



No. 2227
CHAIN-OF-CUSTODY

Data Reported to

LAB WORK ORDER#
PROJECT LOCATION OR NAME
LAI PROJECT #
COLLECTOR

TRRP report?	S=SOIL W=WATER A=AIR	P=PAINT S=SLUDGE OT=OTHER	PRESERVATION	ANALYSES
☐ Yes ☒ No			HCl HNO ₃ H ₂ SO ₄ NaOH ICE UNPRESERVED	BTEX TPH 418.1 TPH 1005 TPH 1006 GASOLINE MOD 8015 DIESEL MOD 8015 OIL MOD 8015 VOC 8260 SVOC 8270 8081 PESTICIDES 8082 PESTICIDES TCPP - METALS (RCRA) TCPP - METALS (RCRA) TOTAL METALS (RCRA) LEAD - TOTAL TCPP - TOX TDS PH EXPLOSIVES CHLORIDES ANIONS ALKALINITY

Field Sample ID	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO ₃	H ₂ SO ₄ NaOH	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
S-1, 15'		11/11/21	1206	S	1				X		X X X X	(9) 262
S-1, 20'			1207								X X X X	
S-1, 25'			1217								X X X X	
S-1, 30'			1218								X X X X	
S-1, 35'			1223								X X X X	
S-4, 15'			1321								X X X X	
S-4, 20'			1322								X X X X	
S-4, 25'			1328								X X X X	
S-4, 30'			1330								X X X X	
TOTAL												

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	TURN AROUND TIME	LABORATORY USE ONLY
	11/12/21 0908		11/12/21 0908	NORMAL ☒	RECEIVING TEMP -48/49 THERM# 128
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	1 DAY ☐	CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	2 DAY ☐	CARRIER BILL #
LABORATORY Xenco				OTHER ☐	HAND DELIVERED

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-8242-1

SDG Number: 21-0100-17

Login Number: 8242

List Number: 1

Creator: Teel, Brianna

List Source: Eurofins Xenco, 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: 880-15605-1

Laboratory Sample Delivery Group: 21-0100-17

Client Project/Site: Sand Dunes 11 CS SND

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:

6/14/2022 1:40:50 PM

Holly Taylor, Project Manager

(806)794-1296

Holly.Taylor@et.eurofinsus.com

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results through



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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: Sand Dunes 11 CS SND

Laboratory Job ID: 880-15605-1
SDG: 21-0100-17

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Job ID: 880-15605-1**Laboratory: Eurofins Midland****Narrative****Job Narrative
880-15605-1****Comments**

No additional comments.

Receipt

The samples were received on 6/8/2022 8:36 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.2° C.

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: C-1 1.0' (880-15605-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SW-4 4.2-10' (880-15605-11). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-27071 and analytical batch 880-27069 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: CCV biased low for benzene and toluene, however an acceptable CCV was analyzed within the 12 hour window, therefore data was qualified and reported.
(CCV 880-27069/33)

Method 8021B: Surrogate recovery for the following samples were outside control limits: SW-3 4.2-10" (880-15605-9) and SW-4 4.2-10' (880-15605-11). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015B NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-27131 and analytical batch 880-27127 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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

General Chemistry

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-27177 and analytical batch 880-27389 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: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: C-1 1.0'

Lab Sample ID: 880-15605-1

Date Collected: 06/07/22 09:30

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		06/08/22 09:16	06/08/22 16:39	1
Toluene	0.00686		0.00199	mg/Kg		06/08/22 09:16	06/08/22 16:39	1
Ethylbenzene	0.0210		0.00199	mg/Kg		06/08/22 09:16	06/08/22 16:39	1
m,p-Xylenes	0.0629		0.00398	mg/Kg		06/08/22 09:16	06/08/22 16:39	1
o-Xylene	0.0243		0.00199	mg/Kg		06/08/22 09:16	06/08/22 16:39	1
Xylenes, Total	0.0872		0.00398	mg/Kg		06/08/22 09:16	06/08/22 16:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130	06/08/22 09:16	06/08/22 16:39	1
1,4-Difluorobenzene (Surr)	98		70 - 130	06/08/22 09:16	06/08/22 16:39	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.115		0.00398	mg/Kg			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/10/22 09:46	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 *1	50.0	mg/Kg		06/09/22 08:32	06/09/22 14:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 14:18	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 14:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	77		70 - 130	06/09/22 08:32	06/09/22 14:18	1
o-Terphenyl (Surr)	78		70 - 130	06/09/22 08:32	06/09/22 14:18	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	126		4.96	mg/Kg			06/13/22 13:17	1

Client Sample ID: C-2 10.0'

Lab Sample ID: 880-15605-2

Date Collected: 06/07/22 09:31

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0400	U	0.0400	mg/Kg		06/08/22 15:10	06/09/22 14:41	20
Toluene	<0.0400	U	0.0400	mg/Kg		06/08/22 15:10	06/09/22 14:41	20
Ethylbenzene	<0.0400	U	0.0400	mg/Kg		06/08/22 15:10	06/09/22 14:41	20
m,p-Xylenes	0.314		0.0800	mg/Kg		06/08/22 15:10	06/09/22 14:41	20
o-Xylene	0.219		0.0400	mg/Kg		06/08/22 15:10	06/09/22 14:41	20
Xylenes, Total	0.533		0.0800	mg/Kg		06/08/22 15:10	06/09/22 14:41	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	06/08/22 15:10	06/09/22 14:41	20
1,4-Difluorobenzene (Surr)	85		70 - 130	06/08/22 15:10	06/09/22 14:41	20

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: C-2 10.0'

Lab Sample ID: 880-15605-2

Date Collected: 06/07/22 09:31

Matrix: Solid

Date Received: 06/08/22 08:36

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.533		0.0800	mg/Kg			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/10/22 09:46	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 *1	49.9	mg/Kg		06/09/22 08:32	06/09/22 14:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/09/22 08:32	06/09/22 14:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/09/22 08:32	06/09/22 14:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	74		70 - 130			06/09/22 08:32	06/09/22 14:40	1
o-Terphenyl (Surr)	77		70 - 130			06/09/22 08:32	06/09/22 14:40	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	58.4		4.95	mg/Kg			06/13/22 13:26	1

Client Sample ID: C-3 10.0'

Lab Sample ID: 880-15605-3

Date Collected: 06/07/22 09:32

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		06/08/22 09:16	06/08/22 16:59	1
Toluene	<0.00199	U	0.00199	mg/Kg		06/08/22 09:16	06/08/22 16:59	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		06/08/22 09:16	06/08/22 16:59	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		06/08/22 09:16	06/08/22 16:59	1
o-Xylene	0.00553		0.00199	mg/Kg		06/08/22 09:16	06/08/22 16:59	1
Xylenes, Total	0.00553		0.00398	mg/Kg		06/08/22 09:16	06/08/22 16:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			06/08/22 09:16	06/08/22 16:59	1
1,4-Difluorobenzene (Surr)	100		70 - 130			06/08/22 09:16	06/08/22 16:59	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00553		0.00398	mg/Kg			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/10/22 09:46	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 *1	50.0	mg/Kg		06/09/22 08:32	06/09/22 15:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 15:01	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: C-3 10.0'

Lab Sample ID: 880-15605-3

Date Collected: 06/07/22 09:32

Matrix: Solid

Date Received: 06/08/22 08:36

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		06/09/22 08:32	06/09/22 15:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	98		70 - 130			06/09/22 08:32	06/09/22 15:01	1
o-Terphenyl (Surr)	100		70 - 130			06/09/22 08:32	06/09/22 15:01	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.3		4.99	mg/Kg			06/13/22 13:36	1

Client Sample ID: C-4 10.0'

Lab Sample ID: 880-15605-4

Date Collected: 06/07/22 09:33

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		06/08/22 09:16	06/08/22 17:20	1
Toluene	<0.00199	U	0.00199	mg/Kg		06/08/22 09:16	06/08/22 17:20	1
Ethylbenzene	0.00248		0.00199	mg/Kg		06/08/22 09:16	06/08/22 17:20	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		06/08/22 09:16	06/08/22 17:20	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		06/08/22 09:16	06/08/22 17:20	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		06/08/22 09:16	06/08/22 17:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			06/08/22 09:16	06/08/22 17:20	1
1,4-Difluorobenzene (Surr)	100		70 - 130			06/08/22 09:16	06/08/22 17:20	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			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/10/22 09:46	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 *1	49.9	mg/Kg		06/09/22 08:32	06/09/22 15:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/09/22 08:32	06/09/22 15:23	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/09/22 08:32	06/09/22 15:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	76		70 - 130			06/09/22 08:32	06/09/22 15:23	1
o-Terphenyl (Surr)	82		70 - 130			06/09/22 08:32	06/09/22 15:23	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53.2		5.01	mg/Kg			06/13/22 13:45	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: SW-1 0-1'

Lab Sample ID: 880-15605-5

Date Collected: 06/07/22 09:40

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 19:03	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 19:03	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 19:03	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		06/08/22 09:16	06/08/22 19:03	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 19:03	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		06/08/22 09:16	06/08/22 19:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	06/08/22 09:16	06/08/22 19:03	1
1,4-Difluorobenzene (Surr)	101		70 - 130	06/08/22 09:16	06/08/22 19:03	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			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/10/22 09:46	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 *1	50.0	mg/Kg		06/09/22 08:32	06/09/22 16:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 16:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 16:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	77		70 - 130	06/09/22 08:32	06/09/22 16:28	1
o-Terphenyl (Surr)	77		70 - 130	06/09/22 08:32	06/09/22 16:28	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	77.2		5.00	mg/Kg			06/13/22 13:54	1

Client Sample ID: SW-2 0-4.1'

Lab Sample ID: 880-15605-6

Date Collected: 06/07/22 09:41

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		06/08/22 09:16	06/08/22 19:24	1
Toluene	<0.00198	U	0.00198	mg/Kg		06/08/22 09:16	06/08/22 19:24	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		06/08/22 09:16	06/08/22 19:24	1
m,p-Xylenes	<0.00397	U	0.00397	mg/Kg		06/08/22 09:16	06/08/22 19:24	1
o-Xylene	0.00455		0.00198	mg/Kg		06/08/22 09:16	06/08/22 19:24	1
Xylenes, Total	0.00455		0.00397	mg/Kg		06/08/22 09:16	06/08/22 19:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	06/08/22 09:16	06/08/22 19:24	1
1,4-Difluorobenzene (Surr)	102		70 - 130	06/08/22 09:16	06/08/22 19:24	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: SW-2 0-4.1'

Lab Sample ID: 880-15605-6

Date Collected: 06/07/22 09:41

Matrix: Solid

Date Received: 06/08/22 08:36

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00455		0.00397	mg/Kg			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/10/22 09:46	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 *1	50.0	mg/Kg		06/09/22 08:32	06/09/22 16:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 16:50	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 16:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	77		70 - 130			06/09/22 08:32	06/09/22 16:50	1
o-Terphenyl (Surr)	77		70 - 130			06/09/22 08:32	06/09/22 16:50	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23.5		5.00	mg/Kg			06/13/22 14:03	1

Client Sample ID: SW-2 4.2-10'

Lab Sample ID: 880-15605-7

Date Collected: 06/07/22 09:42

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		06/08/22 09:16	06/08/22 19:44	1
Toluene	<0.00198	U	0.00198	mg/Kg		06/08/22 09:16	06/08/22 19:44	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		06/08/22 09:16	06/08/22 19:44	1
m,p-Xylenes	<0.00396	U	0.00396	mg/Kg		06/08/22 09:16	06/08/22 19:44	1
o-Xylene	0.00365		0.00198	mg/Kg		06/08/22 09:16	06/08/22 19:44	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		06/08/22 09:16	06/08/22 19:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			06/08/22 09:16	06/08/22 19:44	1
1,4-Difluorobenzene (Surr)	99		70 - 130			06/08/22 09:16	06/08/22 19:44	1

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			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/10/22 09:46	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 *1	50.0	mg/Kg		06/09/22 08:32	06/09/22 17:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 17:12	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: SW-2 4.2-10'

Lab Sample ID: 880-15605-7

Date Collected: 06/07/22 09:42

Matrix: Solid

Date Received: 06/08/22 08:36

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		06/09/22 08:32	06/09/22 17:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	77		70 - 130			06/09/22 08:32	06/09/22 17:12	1
o-Terphenyl (Surr)	80		70 - 130			06/09/22 08:32	06/09/22 17:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.2		5.04	mg/Kg			06/13/22 09:41	1

Client Sample ID: SW-3 0-4.1'

Lab Sample ID: 880-15605-8

Date Collected: 06/07/22 09:43

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00257		0.00199	mg/Kg		06/08/22 09:16	06/08/22 20:05	1
Toluene	0.154		0.00199	mg/Kg		06/08/22 09:16	06/08/22 20:05	1
Ethylbenzene	0.107		0.00199	mg/Kg		06/08/22 09:16	06/08/22 20:05	1
m,p-Xylenes	0.604		0.00398	mg/Kg		06/08/22 09:16	06/08/22 20:05	1
o-Xylene	0.208		0.00199	mg/Kg		06/08/22 09:16	06/08/22 20:05	1
Xylenes, Total	0.812		0.00398	mg/Kg		06/08/22 09:16	06/08/22 20:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130			06/08/22 09:16	06/08/22 20:05	1
1,4-Difluorobenzene (Surr)	97		70 - 130			06/08/22 09:16	06/08/22 20:05	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	1.08		0.00398	mg/Kg			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/10/22 09:46	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 *1	49.9	mg/Kg		06/09/22 08:32	06/09/22 17:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/09/22 08:32	06/09/22 17:33	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/09/22 08:32	06/09/22 17:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	74		70 - 130			06/09/22 08:32	06/09/22 17:33	1
o-Terphenyl (Surr)	75		70 - 130			06/09/22 08:32	06/09/22 17:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.8		4.95	mg/Kg			06/13/22 10:05	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: SW-3 4.2-10"

Lab Sample ID: 880-15605-9

Date Collected: 06/07/22 09:44

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0200	U	0.0200	mg/Kg		06/08/22 15:10	06/09/22 13:22	10
Toluene	0.268		0.0200	mg/Kg		06/08/22 15:10	06/09/22 13:22	10
Ethylbenzene	0.162		0.0200	mg/Kg		06/08/22 15:10	06/09/22 13:22	10
m,p-Xylenes	0.751		0.400	mg/Kg		06/08/22 09:16	06/08/22 21:27	100
o-Xylene	0.213		0.200	mg/Kg		06/08/22 09:16	06/08/22 21:27	100
Xylenes, Total	0.964		0.400	mg/Kg		06/08/22 09:16	06/08/22 21:27	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	06/08/22 09:16	06/08/22 21:27	100
1,4-Difluorobenzene (Surr)	101		70 - 130	06/08/22 09:16	06/08/22 21:27	100

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	1.39		0.400	mg/Kg			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/10/22 09:46	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 *1	50.0	mg/Kg		06/09/22 08:32	06/09/22 17:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 17:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 17:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	79		70 - 130	06/09/22 08:32	06/09/22 17:55	1
o-Terphenyl (Surr)	80		70 - 130	06/09/22 08:32	06/09/22 17:55	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.0		4.99	mg/Kg			06/13/22 10:13	1

Client Sample ID: SW-4 0-4.1'

Lab Sample ID: 880-15605-10

Date Collected: 06/07/22 09:45

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0200	U	0.0200	mg/Kg		06/08/22 15:10	06/09/22 13:47	10
Toluene	0.0246		0.0200	mg/Kg		06/08/22 15:10	06/09/22 13:47	10
Ethylbenzene	<0.0200	U	0.0200	mg/Kg		06/08/22 15:10	06/09/22 13:47	10
m,p-Xylenes	<0.0399	U	0.0399	mg/Kg		06/08/22 15:10	06/09/22 13:47	10
o-Xylene	0.0640		0.0200	mg/Kg		06/08/22 15:10	06/09/22 13:47	10
Xylenes, Total	0.0640		0.0399	mg/Kg		06/08/22 15:10	06/09/22 13:47	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130	06/08/22 15:10	06/09/22 13:47	10
1,4-Difluorobenzene (Surr)	89		70 - 130	06/08/22 15:10	06/09/22 13:47	10

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: SW-4 0-4.1'

Lab Sample ID: 880-15605-10

Date Collected: 06/07/22 09:45

Matrix: Solid

Date Received: 06/08/22 08:36

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0886		0.0399	mg/Kg			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/10/22 09:46	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 *1	50.0	mg/Kg		06/09/22 08:32	06/09/22 18:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 18:23	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 18:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	77		70 - 130			06/09/22 08:32	06/09/22 18:23	1
o-Terphenyl (Surr)	81		70 - 130			06/09/22 08:32	06/09/22 18:23	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43.2		5.00	mg/Kg			06/13/22 10:21	1

Client Sample ID: SW-4 4.2-10'

Lab Sample ID: 880-15605-11

Date Collected: 06/07/22 09:46

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0199	U	0.0199	mg/Kg		06/08/22 15:10	06/09/22 14:14	10
Toluene	0.599		0.199	mg/Kg		06/08/22 09:16	06/08/22 22:08	100
Ethylbenzene	1.48		0.199	mg/Kg		06/08/22 09:16	06/08/22 22:08	100
m,p-Xylenes	4.54		0.398	mg/Kg		06/08/22 09:16	06/08/22 22:08	100
o-Xylene	1.41		0.199	mg/Kg		06/08/22 09:16	06/08/22 22:08	100
Xylenes, Total	5.95		0.398	mg/Kg		06/08/22 09:16	06/08/22 22:08	100
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	145	S1+	70 - 130			06/08/22 09:16	06/08/22 22:08	100
1,4-Difluorobenzene (Surr)	106		70 - 130			06/08/22 09:16	06/08/22 22:08	100

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	8.03		0.398	mg/Kg			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	86.4		50.0	mg/Kg			06/10/22 09:46	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	86.4	*1	50.0	mg/Kg		06/09/22 08:32	06/09/22 18:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 18:44	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: SW-4 4.2-10'

Lab Sample ID: 880-15605-11

Date Collected: 06/07/22 09:46

Matrix: Solid

Date Received: 06/08/22 08:36

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		06/09/22 08:32	06/09/22 18:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	77		70 - 130			06/09/22 08:32	06/09/22 18:44	1
o-Terphenyl (Surr)	81		70 - 130			06/09/22 08:32	06/09/22 18:44	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.5		4.96	mg/Kg			06/13/22 10:29	1

Client Sample ID: BF-1

Lab Sample ID: 880-15605-12

Date Collected: 06/07/22 13:20

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 20:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 20:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 20:25	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		06/08/22 09:16	06/08/22 20:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 20:25	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/08/22 09:16	06/08/22 20:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130			06/08/22 09:16	06/08/22 20:25	1
1,4-Difluorobenzene (Surr)	101		70 - 130			06/08/22 09:16	06/08/22 20:25	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			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/10/22 09:46	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 *1	49.9	mg/Kg		06/09/22 08:32	06/09/22 19:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/09/22 08:32	06/09/22 19:06	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/09/22 08:32	06/09/22 19:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	79		70 - 130			06/09/22 08:32	06/09/22 19:06	1
o-Terphenyl (Surr)	84		70 - 130			06/09/22 08:32	06/09/22 19:06	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	95.2		4.95	mg/Kg			06/13/22 10:52	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: BF-2

Lab Sample ID: 880-15605-13

Date Collected: 06/07/22 13:25

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 20:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 20:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 20:46	1
m,p-Xylenes	<0.00401	U	0.00401	mg/Kg		06/08/22 09:16	06/08/22 20:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 20:46	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		06/08/22 09:16	06/08/22 20:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	06/08/22 09:16	06/08/22 20:46	1
1,4-Difluorobenzene (Surr)	99		70 - 130	06/08/22 09:16	06/08/22 20:46	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			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/10/22 09:46	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 *1	50.0	mg/Kg		06/09/22 08:32	06/09/22 19:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 19:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 19:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	81		70 - 130	06/09/22 08:32	06/09/22 19:28	1
o-Terphenyl (Surr)	85		70 - 130	06/09/22 08:32	06/09/22 19:28	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	128		5.01	mg/Kg			06/13/22 11:00	1

Client Sample ID: BF-3

Lab Sample ID: 880-15605-14

Date Collected: 06/07/22 13:30

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		06/08/22 09:16	06/08/22 21:06	1
Toluene	<0.00199	U	0.00199	mg/Kg		06/08/22 09:16	06/08/22 21:06	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		06/08/22 09:16	06/08/22 21:06	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		06/08/22 09:16	06/08/22 21:06	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		06/08/22 09:16	06/08/22 21:06	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		06/08/22 09:16	06/08/22 21:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	06/08/22 09:16	06/08/22 21:06	1
1,4-Difluorobenzene (Surr)	96		70 - 130	06/08/22 09:16	06/08/22 21:06	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: BF-3

Lab Sample ID: 880-15605-14

Date Collected: 06/07/22 13:30

Matrix: Solid

Date Received: 06/08/22 08:36

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	-		06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg	-		06/10/22 09:46	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 *1	49.9	mg/Kg	-	06/09/22 08:32	06/09/22 19:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg	-	06/09/22 08:32	06/09/22 19:50	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg	-	06/09/22 08:32	06/09/22 19:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	75		70 - 130			06/09/22 08:32	06/09/22 19:50	1
o-Terphenyl (Surr)	77		70 - 130			06/09/22 08:32	06/09/22 19:50	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	138		4.97	mg/Kg	-		06/13/22 11:08	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

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)
880-15605-1	C-1 1.0'	139 S1+	98
880-15605-2	C-2 10.0'	113	85
880-15605-3	C-3 10.0'	109	100
880-15605-4	C-4 10.0'	108	100
880-15605-5	SW-1 0-1'	104	101
880-15605-6	SW-2 0-4.1'	113	102
880-15605-7	SW-2 4.2-10'	110	99
880-15605-8	SW-3 0-4.1'	130	97
880-15605-9	SW-3 4.2-10"	113	101
880-15605-10	SW-4 0-4.1'	120	89
880-15605-11	SW-4 4.2-10'	145 S1+	106
880-15605-12	BF-1	112	101
880-15605-13	BF-2	110	99
880-15605-14	BF-3	115	96
LCS 880-27071/1-A	Lab Control Sample	101	103
LCS 880-27101/1-A	Lab Control Sample	111	108
LCSD 880-27071/2-A	Lab Control Sample Dup	101	104
LCSD 880-27101/2-A	Lab Control Sample Dup	110	109
MB 880-27071/5-A	Method Blank	103	92
MB 880-27099/8	Method Blank	79	99
MB 880-27101/5-A	Method Blank	81	95

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)
880-15605-1	C-1 1.0'	77	78
880-15605-2	C-2 10.0'	74	77
880-15605-3	C-3 10.0'	98	100
880-15605-4	C-4 10.0'	76	82
880-15605-5	SW-1 0-1'	77	77
880-15605-6	SW-2 0-4.1'	77	77
880-15605-7	SW-2 4.2-10'	77	80
880-15605-8	SW-3 0-4.1'	74	75
880-15605-9	SW-3 4.2-10"	79	80
880-15605-10	SW-4 0-4.1'	77	81
880-15605-11	SW-4 4.2-10'	77	81
880-15605-12	BF-1	79	84
880-15605-13	BF-2	81	85
880-15605-14	BF-3	75	77
LCS 880-27131/2-A	Lab Control Sample	100	106
LCSD 880-27131/3-A	Lab Control Sample Dup	104	110
MB 880-27131/1-A	Method Blank	81	89

Surrogate Legend

Eurofins Midland

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND
1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

Job ID: 880-15605-1
SDG: 21-0100-17

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-27071/5-A

Matrix: Solid

Analysis Batch: 27069

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27071

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 11:42	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 11:42	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 11:42	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		06/08/22 09:16	06/08/22 11:42	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 11:42	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/08/22 09:16	06/08/22 11:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	06/08/22 09:16	06/08/22 11:42	1
1,4-Difluorobenzene (Surr)	92		70 - 130	06/08/22 09:16	06/08/22 11:42	1

Lab Sample ID: LCS 880-27071/1-A

Matrix: Solid

Analysis Batch: 27069

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27071

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1028		mg/Kg		103	70 - 130
Toluene	0.100	0.09681		mg/Kg		97	70 - 130
Ethylbenzene	0.100	0.1002		mg/Kg		100	70 - 130
m,p-Xylenes	0.200	0.2015		mg/Kg		101	70 - 130
o-Xylene	0.100	0.1002		mg/Kg		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: LCSD 880-27071/2-A

Matrix: Solid

Analysis Batch: 27069

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27071

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1108		mg/Kg		111	70 - 130	7	35
Toluene	0.100	0.1054		mg/Kg		105	70 - 130	8	35
Ethylbenzene	0.100	0.1077		mg/Kg		108	70 - 130	7	35
m,p-Xylenes	0.200	0.2172		mg/Kg		109	70 - 130	7	35
o-Xylene	0.100	0.1084		mg/Kg		108	70 - 130	8	35

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

Lab Sample ID: MB 880-27099/8

Matrix: Solid

Analysis Batch: 27099

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			06/08/22 18:18	1
Toluene	<0.00200	U	0.00200	mg/Kg			06/08/22 18:18	1

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

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

Lab Sample ID: MB 880-27099/8

Matrix: Solid

Analysis Batch: 27099

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			06/08/22 18:18	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg			06/08/22 18:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			06/08/22 18:18	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			06/08/22 18:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130		06/08/22 18:18	1
1,4-Difluorobenzene (Surr)	99		70 - 130		06/08/22 18:18	1

Lab Sample ID: MB 880-27101/5-A

Matrix: Solid

Analysis Batch: 27099

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27101

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/08/22 15:10	06/09/22 04:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/08/22 15:10	06/09/22 04:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/08/22 15:10	06/09/22 04:18	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		06/08/22 15:10	06/09/22 04:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/08/22 15:10	06/09/22 04:18	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/08/22 15:10	06/09/22 04:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130	06/08/22 15:10	06/09/22 04:18	1
1,4-Difluorobenzene (Surr)	95		70 - 130	06/08/22 15:10	06/09/22 04:18	1

Lab Sample ID: LCS 880-27101/1-A

Matrix: Solid

Analysis Batch: 27099

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27101

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1029		mg/Kg		103	70 - 130
Toluene	0.100	0.08959		mg/Kg		90	70 - 130
Ethylbenzene	0.100	0.09470		mg/Kg		95	70 - 130
m,p-Xylenes	0.200	0.1849		mg/Kg		92	70 - 130
o-Xylene	0.100	0.09376		mg/Kg		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: LCSD 880-27101/2-A

Matrix: Solid

Analysis Batch: 27099

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27101

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1024		mg/Kg		102	70 - 130	0	35
Toluene	0.100	0.09594		mg/Kg		96	70 - 130	7	35
Ethylbenzene	0.100	0.1049		mg/Kg		105	70 - 130	10	35

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

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

Lab Sample ID: LCSD 880-27101/2-A

Matrix: Solid

Analysis Batch: 27099

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27101

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m,p-Xylenes	0.200	0.2034		mg/Kg		102	70 - 130	10	35
o-Xylene	0.100	0.1011		mg/Kg		101	70 - 130	8	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

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

Lab Sample ID: MB 880-27131/1-A

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27131

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 10:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 10:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/09/22 08:32	06/09/22 10:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	81		70 - 130	06/09/22 08:32	06/09/22 10:24	1
o-Terphenyl (Surr)	89		70 - 130	06/09/22 08:32	06/09/22 10:24	1

Lab Sample ID: LCS 880-27131/2-A

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27131

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	802.0		mg/Kg		80	70 - 130
Diesel Range Organics (Over C10-C28)	1000	782.3		mg/Kg		78	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	100		70 - 130
o-Terphenyl (Surr)	106		70 - 130

Lab Sample ID: LCSD 880-27131/3-A

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27131

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1061	*1	mg/Kg		106	70 - 130	28	20
Diesel Range Organics (Over C10-C28)	1000	820.3		mg/Kg		82	70 - 130	5	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

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

Lab Sample ID: LCSD 880-27131/3-A

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27131

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane (Surr)	104		70 - 130
o-Terphenyl (Surr)	110		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-27177/1-A

Matrix: Solid

Analysis Batch: 27389

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB	MB							
	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Chloride	<5.00	U	5.00	mg/Kg			06/13/22 09:27		1

Lab Sample ID: LCS 880-27177/2-A

Matrix: Solid

Analysis Batch: 27389

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte		Spike	LCS	LCS				%Rec	
		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride		250	250.6		mg/Kg		100	90 - 110	

Lab Sample ID: LCSD 880-27177/3-A

Matrix: Solid

Analysis Batch: 27389

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte		Spike	LCSD	LCSD				%Rec		RPD
		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride		250	250.8		mg/Kg		100	90 - 110	0	20

Lab Sample ID: MB 880-27178/1-A

Matrix: Solid

Analysis Batch: 27394

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB	MB							
	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Chloride	<5.00	U	5.00	mg/Kg			06/13/22 09:18		1

Lab Sample ID: LCS 880-27178/2-A

Matrix: Solid

Analysis Batch: 27394

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte		Spike	LCS	LCS				%Rec	
		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride		250	243.0		mg/Kg		97	90 - 110	

Lab Sample ID: LCSD 880-27178/3-A

Matrix: Solid

Analysis Batch: 27394

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte		Spike	LCSD	LCSD				%Rec		RPD
		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride		250	244.4		mg/Kg		98	90 - 110	1	20

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-15605-7 MS

Matrix: Solid

Analysis Batch: 27394

Client Sample ID: SW-2 4.2-10'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	14.2		252	249.5		mg/Kg		93	90 - 110

Lab Sample ID: 880-15605-7 MSD

Matrix: Solid

Analysis Batch: 27394

Client Sample ID: SW-2 4.2-10'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	14.2		252	250.4		mg/Kg		94	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

GC VOA

Analysis Batch: 27069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-1	C-1 1.0'	Total/NA	Solid	8021B	27071
880-15605-3	C-3 10.0'	Total/NA	Solid	8021B	27071
880-15605-4	C-4 10.0'	Total/NA	Solid	8021B	27071
880-15605-5	SW-1 0-1'	Total/NA	Solid	8021B	27071
880-15605-6	SW-2 0-4.1'	Total/NA	Solid	8021B	27071
880-15605-7	SW-2 4.2-10'	Total/NA	Solid	8021B	27071
880-15605-8	SW-3 0-4.1'	Total/NA	Solid	8021B	27071
880-15605-9	SW-3 4.2-10"	Total/NA	Solid	8021B	27071
880-15605-11	SW-4 4.2-10'	Total/NA	Solid	8021B	27071
880-15605-12	BF-1	Total/NA	Solid	8021B	27071
880-15605-13	BF-2	Total/NA	Solid	8021B	27071
880-15605-14	BF-3	Total/NA	Solid	8021B	27071
MB 880-27071/5-A	Method Blank	Total/NA	Solid	8021B	27071
LCS 880-27071/1-A	Lab Control Sample	Total/NA	Solid	8021B	27071
LCSD 880-27071/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	27071

Prep Batch: 27071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-1	C-1 1.0'	Total/NA	Solid	5035	
880-15605-3	C-3 10.0'	Total/NA	Solid	5035	
880-15605-4	C-4 10.0'	Total/NA	Solid	5035	
880-15605-5	SW-1 0-1'	Total/NA	Solid	5035	
880-15605-6	SW-2 0-4.1'	Total/NA	Solid	5035	
880-15605-7	SW-2 4.2-10'	Total/NA	Solid	5035	
880-15605-8	SW-3 0-4.1'	Total/NA	Solid	5035	
880-15605-9	SW-3 4.2-10"	Total/NA	Solid	5035	
880-15605-11	SW-4 4.2-10'	Total/NA	Solid	5035	
880-15605-12	BF-1	Total/NA	Solid	5035	
880-15605-13	BF-2	Total/NA	Solid	5035	
880-15605-14	BF-3	Total/NA	Solid	5035	
MB 880-27071/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-27071/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-27071/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 27099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-2	C-2 10.0'	Total/NA	Solid	8021B	27101
880-15605-9	SW-3 4.2-10"	Total/NA	Solid	8021B	27101
880-15605-10	SW-4 0-4.1'	Total/NA	Solid	8021B	27101
880-15605-11	SW-4 4.2-10'	Total/NA	Solid	8021B	27101
MB 880-27099/8	Method Blank	Total/NA	Solid	8021B	
MB 880-27101/5-A	Method Blank	Total/NA	Solid	8021B	27101
LCS 880-27101/1-A	Lab Control Sample	Total/NA	Solid	8021B	27101
LCSD 880-27101/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	27101

Prep Batch: 27101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-2	C-2 10.0'	Total/NA	Solid	5035	
880-15605-9	SW-3 4.2-10"	Total/NA	Solid	5035	
880-15605-10	SW-4 0-4.1'	Total/NA	Solid	5035	
880-15605-11	SW-4 4.2-10'	Total/NA	Solid	5035	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

GC VOA (Continued)

Prep Batch: 27101 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-27101/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-27101/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-27101/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 27194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-1	C-1 1.0'	Total/NA	Solid	Total BTEX	
880-15605-2	C-2 10.0'	Total/NA	Solid	Total BTEX	
880-15605-3	C-3 10.0'	Total/NA	Solid	Total BTEX	
880-15605-4	C-4 10.0'	Total/NA	Solid	Total BTEX	
880-15605-5	SW-1 0-1'	Total/NA	Solid	Total BTEX	
880-15605-6	SW-2 0-4.1'	Total/NA	Solid	Total BTEX	
880-15605-7	SW-2 4.2-10'	Total/NA	Solid	Total BTEX	
880-15605-8	SW-3 0-4.1'	Total/NA	Solid	Total BTEX	
880-15605-9	SW-3 4.2-10"	Total/NA	Solid	Total BTEX	
880-15605-10	SW-4 0-4.1'	Total/NA	Solid	Total BTEX	
880-15605-11	SW-4 4.2-10'	Total/NA	Solid	Total BTEX	
880-15605-12	BF-1	Total/NA	Solid	Total BTEX	
880-15605-13	BF-2	Total/NA	Solid	Total BTEX	
880-15605-14	BF-3	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 27127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-1	C-1 1.0'	Total/NA	Solid	8015B NM	27131
880-15605-2	C-2 10.0'	Total/NA	Solid	8015B NM	27131
880-15605-3	C-3 10.0'	Total/NA	Solid	8015B NM	27131
880-15605-4	C-4 10.0'	Total/NA	Solid	8015B NM	27131
880-15605-5	SW-1 0-1'	Total/NA	Solid	8015B NM	27131
880-15605-6	SW-2 0-4.1'	Total/NA	Solid	8015B NM	27131
880-15605-7	SW-2 4.2-10'	Total/NA	Solid	8015B NM	27131
880-15605-8	SW-3 0-4.1'	Total/NA	Solid	8015B NM	27131
880-15605-9	SW-3 4.2-10"	Total/NA	Solid	8015B NM	27131
880-15605-10	SW-4 0-4.1'	Total/NA	Solid	8015B NM	27131
880-15605-11	SW-4 4.2-10'	Total/NA	Solid	8015B NM	27131
880-15605-12	BF-1	Total/NA	Solid	8015B NM	27131
880-15605-13	BF-2	Total/NA	Solid	8015B NM	27131
880-15605-14	BF-3	Total/NA	Solid	8015B NM	27131
MB 880-27131/1-A	Method Blank	Total/NA	Solid	8015B NM	27131
LCS 880-27131/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	27131
LCSD 880-27131/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	27131

Prep Batch: 27131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-1	C-1 1.0'	Total/NA	Solid	8015NM Prep	
880-15605-2	C-2 10.0'	Total/NA	Solid	8015NM Prep	
880-15605-3	C-3 10.0'	Total/NA	Solid	8015NM Prep	
880-15605-4	C-4 10.0'	Total/NA	Solid	8015NM Prep	
880-15605-5	SW-1 0-1'	Total/NA	Solid	8015NM Prep	
880-15605-6	SW-2 0-4.1'	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

GC Semi VOA (Continued)

Prep Batch: 27131 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-7	SW-2 4.2-10'	Total/NA	Solid	8015NM Prep	
880-15605-8	SW-3 0-4.1'	Total/NA	Solid	8015NM Prep	
880-15605-9	SW-3 4.2-10"	Total/NA	Solid	8015NM Prep	
880-15605-10	SW-4 0-4.1'	Total/NA	Solid	8015NM Prep	
880-15605-11	SW-4 4.2-10'	Total/NA	Solid	8015NM Prep	
880-15605-12	BF-1	Total/NA	Solid	8015NM Prep	
880-15605-13	BF-2	Total/NA	Solid	8015NM Prep	
880-15605-14	BF-3	Total/NA	Solid	8015NM Prep	
MB 880-27131/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-27131/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-27131/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 27260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-1	C-1 1.0'	Total/NA	Solid	8015 NM	
880-15605-2	C-2 10.0'	Total/NA	Solid	8015 NM	
880-15605-3	C-3 10.0'	Total/NA	Solid	8015 NM	
880-15605-4	C-4 10.0'	Total/NA	Solid	8015 NM	
880-15605-5	SW-1 0-1'	Total/NA	Solid	8015 NM	
880-15605-6	SW-2 0-4.1'	Total/NA	Solid	8015 NM	
880-15605-7	SW-2 4.2-10'	Total/NA	Solid	8015 NM	
880-15605-8	SW-3 0-4.1'	Total/NA	Solid	8015 NM	
880-15605-9	SW-3 4.2-10"	Total/NA	Solid	8015 NM	
880-15605-10	SW-4 0-4.1'	Total/NA	Solid	8015 NM	
880-15605-11	SW-4 4.2-10'	Total/NA	Solid	8015 NM	
880-15605-12	BF-1	Total/NA	Solid	8015 NM	
880-15605-13	BF-2	Total/NA	Solid	8015 NM	
880-15605-14	BF-3	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 27177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-1	C-1 1.0'	Soluble	Solid	DI Leach	
880-15605-2	C-2 10.0'	Soluble	Solid	DI Leach	
880-15605-3	C-3 10.0'	Soluble	Solid	DI Leach	
880-15605-4	C-4 10.0'	Soluble	Solid	DI Leach	
880-15605-5	SW-1 0-1'	Soluble	Solid	DI Leach	
880-15605-6	SW-2 0-4.1'	Soluble	Solid	DI Leach	
MB 880-27177/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-27177/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-27177/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 27178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-7	SW-2 4.2-10'	Soluble	Solid	DI Leach	
880-15605-8	SW-3 0-4.1'	Soluble	Solid	DI Leach	
880-15605-9	SW-3 4.2-10"	Soluble	Solid	DI Leach	
880-15605-10	SW-4 0-4.1'	Soluble	Solid	DI Leach	
880-15605-11	SW-4 4.2-10'	Soluble	Solid	DI Leach	
880-15605-12	BF-1	Soluble	Solid	DI Leach	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

HPLC/IC (Continued)

Leach Batch: 27178 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-13	BF-2	Soluble	Solid	DI Leach	
880-15605-14	BF-3	Soluble	Solid	DI Leach	
MB 880-27178/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-27178/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-27178/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-15605-7 MS	SW-2 4.2-10'	Soluble	Solid	DI Leach	
880-15605-7 MSD	SW-2 4.2-10'	Soluble	Solid	DI Leach	

Analysis Batch: 27389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-1	C-1 1.0'	Soluble	Solid	300.0	27177
880-15605-2	C-2 10.0'	Soluble	Solid	300.0	27177
880-15605-3	C-3 10.0'	Soluble	Solid	300.0	27177
880-15605-4	C-4 10.0'	Soluble	Solid	300.0	27177
880-15605-5	SW-1 0-1'	Soluble	Solid	300.0	27177
880-15605-6	SW-2 0-4.1'	Soluble	Solid	300.0	27177
MB 880-27177/1-A	Method Blank	Soluble	Solid	300.0	27177
LCS 880-27177/2-A	Lab Control Sample	Soluble	Solid	300.0	27177
LCSD 880-27177/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	27177

Analysis Batch: 27394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15605-7	SW-2 4.2-10'	Soluble	Solid	300.0	27178
880-15605-8	SW-3 0-4.1'	Soluble	Solid	300.0	27178
880-15605-9	SW-3 4.2-10"	Soluble	Solid	300.0	27178
880-15605-10	SW-4 0-4.1'	Soluble	Solid	300.0	27178
880-15605-11	SW-4 4.2-10'	Soluble	Solid	300.0	27178
880-15605-12	BF-1	Soluble	Solid	300.0	27178
880-15605-13	BF-2	Soluble	Solid	300.0	27178
880-15605-14	BF-3	Soluble	Solid	300.0	27178
MB 880-27178/1-A	Method Blank	Soluble	Solid	300.0	27178
LCS 880-27178/2-A	Lab Control Sample	Soluble	Solid	300.0	27178
LCSD 880-27178/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	27178
880-15605-7 MS	SW-2 4.2-10'	Soluble	Solid	300.0	27178
880-15605-7 MSD	SW-2 4.2-10'	Soluble	Solid	300.0	27178

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: C-1 1.0'

Lab Sample ID: 880-15605-1

Date Collected: 06/07/22 09:30

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1			27069	06/08/22 16:39	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 14:18	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	27177	06/09/22 12:04	CH	XEN MID
Soluble	Analysis	300.0		1			27389	06/13/22 13:17	CH	XEN MID

Client Sample ID: C-2 10.0'

Lab Sample ID: 880-15605-2

Date Collected: 06/07/22 09:31

Matrix: Solid

Date Received: 06/08/22 08:36

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	27101	06/08/22 15:10	MR	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	27099	06/09/22 14:41	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 14:40	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	27177	06/09/22 12:04	CH	XEN MID
Soluble	Analysis	300.0		1			27389	06/13/22 13:26	CH	XEN MID

Client Sample ID: C-3 10.0'

Lab Sample ID: 880-15605-3

Date Collected: 06/07/22 09:32

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1			27069	06/08/22 16:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 15:01	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	27177	06/09/22 12:04	CH	XEN MID
Soluble	Analysis	300.0		1			27389	06/13/22 13:36	CH	XEN MID

Client Sample ID: C-4 10.0'

Lab Sample ID: 880-15605-4

Date Collected: 06/07/22 09:33

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1			27069	06/08/22 17:20	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: C-4 10.0'

Lab Sample ID: 880-15605-4

Date Collected: 06/07/22 09:33

Matrix: Solid

Date Received: 06/08/22 08:36

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			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 15:23	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	27177	06/09/22 12:04	CH	XEN MID
Soluble	Analysis	300.0		1			27389	06/13/22 13:45	CH	XEN MID

Client Sample ID: SW-1 0-1'

Lab Sample ID: 880-15605-5

Date Collected: 06/07/22 09:40

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1			27069	06/08/22 19:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 16:28	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	27177	06/09/22 12:04	CH	XEN MID
Soluble	Analysis	300.0		1			27389	06/13/22 13:54	CH	XEN MID

Client Sample ID: SW-2 0-4.1'

Lab Sample ID: 880-15605-6

Date Collected: 06/07/22 09:41

Matrix: Solid

Date Received: 06/08/22 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1			27069	06/08/22 19:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 16:50	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	27177	06/09/22 12:04	CH	XEN MID
Soluble	Analysis	300.0		1			27389	06/13/22 14:03	CH	XEN MID

Client Sample ID: SW-2 4.2-10'

Lab Sample ID: 880-15605-7

Date Collected: 06/07/22 09:42

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1			27069	06/08/22 19:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 17:12	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: SW-2 4.2-10'

Lab Sample ID: 880-15605-7

Date Collected: 06/07/22 09:42

Matrix: Solid

Date Received: 06/08/22 08:36

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	27178	06/09/22 12:07	CH	XEN MID
Soluble	Analysis	300.0		1			27394	06/13/22 09:41	CH	XEN MID

Client Sample ID: SW-3 0-4.1'

Lab Sample ID: 880-15605-8

Date Collected: 06/07/22 09:43

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1			27069	06/08/22 20:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 17:33	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	27178	06/09/22 12:07	CH	XEN MID
Soluble	Analysis	300.0		1			27394	06/13/22 10:05	CH	XEN MID

Client Sample ID: SW-3 4.2-10"

Lab Sample ID: 880-15605-9

Date Collected: 06/07/22 09:44

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		100			27069	06/08/22 21:27	MR	XEN MID
Total/NA	Prep	5035			4.99 g	5 mL	27101	06/08/22 15:10	MR	XEN MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	27099	06/09/22 13:22	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 17:55	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	27178	06/09/22 12:07	CH	XEN MID
Soluble	Analysis	300.0		1			27394	06/13/22 10:13	CH	XEN MID

Client Sample ID: SW-4 0-4.1'

Lab Sample ID: 880-15605-10

Date Collected: 06/07/22 09:45

Matrix: Solid

Date Received: 06/08/22 08:36

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	27101	06/08/22 15:10	MR	XEN MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	27099	06/09/22 13:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 18:23	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: SW-4 0-4.1'

Lab Sample ID: 880-15605-10

Date Collected: 06/07/22 09:45

Matrix: Solid

Date Received: 06/08/22 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	27178	06/09/22 12:07	CH	XEN MID
Soluble	Analysis	300.0		1			27394	06/13/22 10:21	CH	XEN MID

Client Sample ID: SW-4 4.2-10'

Lab Sample ID: 880-15605-11

Date Collected: 06/07/22 09:46

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		100			27069	06/08/22 22:08	MR	XEN MID
Total/NA	Prep	5035			5.03 g	5 mL	27101	06/08/22 15:10	MR	XEN MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	27099	06/09/22 14:14	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 18:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	27178	06/09/22 12:07	CH	XEN MID
Soluble	Analysis	300.0		1			27394	06/13/22 10:29	CH	XEN MID

Client Sample ID: BF-1

Lab Sample ID: 880-15605-12

Date Collected: 06/07/22 13:20

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1			27069	06/08/22 20:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 19:06	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	27178	06/09/22 12:07	CH	XEN MID
Soluble	Analysis	300.0		1			27394	06/13/22 10:52	CH	XEN MID

Client Sample ID: BF-2

Lab Sample ID: 880-15605-13

Date Collected: 06/07/22 13:25

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1			27069	06/08/22 20:46	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 19:28	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Client Sample ID: BF-2

Lab Sample ID: 880-15605-13

Date Collected: 06/07/22 13:25

Matrix: Solid

Date Received: 06/08/22 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	27178	06/09/22 12:07	CH	XEN MID
Soluble	Analysis	300.0		1			27394	06/13/22 11:00	CH	XEN MID

Client Sample ID: BF-3

Lab Sample ID: 880-15605-14

Date Collected: 06/07/22 13:30

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1			27069	06/08/22 21:06	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27194	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27260	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	27131	06/09/22 08:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/09/22 19:50	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	27178	06/09/22 12:07	CH	XEN MID
Soluble	Analysis	300.0		1			27394	06/13/22 11:08	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: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

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: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

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: Sand Dunes 11 CS SND

Job ID: 880-15605-1
SDG: 21-0100-17

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-15605-1	C-1 1.0'	Solid	06/07/22 09:30	06/08/22 08:36
880-15605-2	C-2 10.0'	Solid	06/07/22 09:31	06/08/22 08:36
880-15605-3	C-3 10.0'	Solid	06/07/22 09:32	06/08/22 08:36
880-15605-4	C-4 10.0'	Solid	06/07/22 09:33	06/08/22 08:36
880-15605-5	SW-1 0-1'	Solid	06/07/22 09:40	06/08/22 08:36
880-15605-6	SW-2 0-4.1'	Solid	06/07/22 09:41	06/08/22 08:36
880-15605-7	SW-2 4.2-10'	Solid	06/07/22 09:42	06/08/22 08:36
880-15605-8	SW-3 0-4.1'	Solid	06/07/22 09:43	06/08/22 08:36
880-15605-9	SW-3 4.2-10"	Solid	06/07/22 09:44	06/08/22 08:36
880-15605-10	SW-4 0-4.1'	Solid	06/07/22 09:45	06/08/22 08:36
880-15605-11	SW-4 4.2-10'	Solid	06/07/22 09:46	06/08/22 08:36
880-15605-12	BF-1	Solid	06/07/22 13:20	06/08/22 08:36
880-15605-13	BF-2	Solid	06/07/22 13:25	06/08/22 08:36
880-15605-14	BF-3	Solid	06/07/22 13:30	06/08/22 08:36

Varson & Associates, Inc.

Environmental Consultants

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

DATE 6-7-22 PAGE 1 OF 1
PO# _____ LAB WORK ORDER# _____
PROJECT LOCATION OR NAME Sand Dunes 11 CS SWD
LAI PROJECT # 21-0100-17 COLLECTOR: TP

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 _____
Lab # _____
Date _____
Time _____
Matrix _____

of Containers _____
HCl _____
HNO₃ _____
H₂SO₄ ☐ NaOH ☐
ICE _____
UNPRESERVED _____

ANALYSES
BTEX ☒ MTBE ☐
TPH 418 1 ☐ TPH 1005 ☐ TPH 1006 ☐
GASOLINE MOD 8015 ☒
DIESEL - MOD 8015 ☒
OIL - MOD 8015 ☒
VOC 8260 ☐
SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
8081 PESTICIDES ☐ 8151 HERBICIDES ☐
TCPP - METALS (RCRA) ☐ Semi-VOC ☐
TOTAL METALS (RCRA) ☐ OTHER LIST ☐
LEAD - TOTAL ☐ D W 200 8 ☐ TCLP ☐
RCI ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
PH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PENTACHLORATE ☐
CHLORIDES ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES
LAI Proj # _____
21-0100-17

Field Sample ID	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO ₃	H ₂ SO ₄ ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
C-1 1.0'		6/7/22	0930	S	1				X		X	
C-2 10.0'			0931								X	
C-3 10.0'			0932								X	
C-4 10.0'			0933								X	
SW-1 0-1'			0940								X	
SW-2 0-4'			0941								X	
SW-2 4-2'			0942								X	
SW-3 0-4'			0943								X	
SW-3 4-2'			0944								X	
SW-4 0-4'			0945								X	
SW-4 4-2'			0946								X	
BF-1			1320								X	
BF-2			1325								X	
BF-3			1330								X	
TOTAL 14												



880-15606 Chain of Custody

RELINQUISHED BY (Signature) _____ DATE/TIME 6/8/22 2:34 RECEIVED BY (Signature) _____
RELINQUISHED BY (Signature) _____ DATE/TIME _____ RECEIVED BY (Signature) _____

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

LABORATORY USE ONLY:
RECEIVING TEMP 41.2 THERM# IFC-2
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
CARRIER BILL # _____
☒ HAND DELIVERED

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

LABORATORY USE ONLY:
RECEIVING TEMP 41.2 THERM# IFC-2
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
CARRIER BILL # _____
☒ HAND DELIVERED

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-15605-1

SDG Number: 21-0100-17

Login Number: 15605**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	



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-12079-1

Laboratory Sample Delivery Group: 22-0105-06

Client Project/Site: Sand Dunes 11 CS (Second pill)

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:
3/14/2022 3:58:21 PM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

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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: Sand Dunes 11 CS (Second pill)

Laboratory Job ID: 880-12079-1
SDG: 22-0105-06

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Job ID: 880-12079-1

Laboratory: Eurofins Midland

Narrative

Job Narrative 880-12079-1

Comments

No additional comments.

Receipt

The samples were received on 3/7/2022 9:28 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 0.1° C.

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-21133 and analytical batch 880-21405 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-21133 and analytical batch 880-21405 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 RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-21160 and analytical batch 880-21379 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28)

Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (880-12079-A-1-F MS) and (880-12079-A-1-G MSD). 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

No analytical or quality issues were noted, other than those described 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: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-1, 0.5

Lab Sample ID: 880-12079-1

Date Collected: 03/04/22 11:00

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 22:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 22:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 22:08	1
m,p-Xylenes	<0.00401	U	0.00401	mg/Kg		03/10/22 11:44	03/13/22 22:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 22:08	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		03/10/22 11:44	03/13/22 22:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	03/10/22 11:44	03/13/22 22:08	1
1,4-Difluorobenzene (Surr)	99		70 - 130	03/10/22 11:44	03/13/22 22:08	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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 12:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		03/08/22 14:48	03/11/22 12:09	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/08/22 14:48	03/11/22 12:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	111		70 - 130	03/08/22 14:48	03/11/22 12:09	1
o-Terphenyl (Surr)	129		70 - 130	03/08/22 14:48	03/11/22 12:09	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.3		5.00	mg/Kg			03/11/22 20:00	1

Client Sample ID: S-1, 1

Lab Sample ID: 880-12079-2

Date Collected: 03/04/22 11:02

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		03/10/22 11:44	03/13/22 22:36	1
Toluene	<0.00201	U	0.00201	mg/Kg		03/10/22 11:44	03/13/22 22:36	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		03/10/22 11:44	03/13/22 22:36	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		03/10/22 11:44	03/13/22 22:36	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		03/10/22 11:44	03/13/22 22:36	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		03/10/22 11:44	03/13/22 22:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	03/10/22 11:44	03/13/22 22:36	1
1,4-Difluorobenzene (Surr)	111		70 - 130	03/10/22 11:44	03/13/22 22:36	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-1, 1

Lab Sample ID: 880-12079-2

Date Collected: 03/04/22 11:02

Matrix: Solid

Date Received: 03/07/22 09:28

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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 13:13	1
Diesel Range Organics (Over C10-C28)	<49.8	U *1	49.8	mg/Kg		03/08/22 14:48	03/11/22 13:13	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		03/08/22 14:48	03/11/22 13:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	125		70 - 130			03/08/22 14:48	03/11/22 13:13	1
o-Terphenyl (Surr)	146	S1+	70 - 130			03/08/22 14:48	03/11/22 13:13	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.71		4.98	mg/Kg			03/11/22 20:09	1

Client Sample ID: S-1, 2

Lab Sample ID: 880-12079-3

Date Collected: 03/04/22 11:04

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/13/22 23:03	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/13/22 23:03	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/13/22 23:03	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		03/10/22 11:44	03/13/22 23:03	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/13/22 23:03	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/10/22 11:44	03/13/22 23:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130			03/10/22 11:44	03/13/22 23:03	1
1,4-Difluorobenzene (Surr)	86		70 - 130			03/10/22 11:44	03/13/22 23:03	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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 13:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		03/08/22 14:48	03/11/22 13:35	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-1, 2

Lab Sample ID: 880-12079-3

Date Collected: 03/04/22 11:04

Matrix: Solid

Date Received: 03/07/22 09:28

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		03/08/22 14:48	03/11/22 13:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	81		70 - 130			03/08/22 14:48	03/11/22 13:35	1
o-Terphenyl (Surr)	87		70 - 130			03/08/22 14:48	03/11/22 13:35	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.64		4.95	mg/Kg			03/11/22 20:18	1

Client Sample ID: S-1, 3

Lab Sample ID: 880-12079-4

Date Collected: 03/04/22 11:06

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 23:31	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 23:31	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 23:31	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		03/10/22 11:44	03/13/22 23:31	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 23:31	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/10/22 11:44	03/13/22 23:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			03/10/22 11:44	03/13/22 23:31	1
1,4-Difluorobenzene (Surr)	114		70 - 130			03/10/22 11:44	03/13/22 23:31	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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 13:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		03/08/22 14:48	03/11/22 13:57	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 14:48	03/11/22 13:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	93		70 - 130			03/08/22 14:48	03/11/22 13:57	1
o-Terphenyl (Surr)	103		70 - 130			03/08/22 14:48	03/11/22 13:57	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.13		5.01	mg/Kg			03/11/22 20:27	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-1, 4

Lab Sample ID: 880-12079-5

Date Collected: 03/04/22 11:08

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/13/22 23:58	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/13/22 23:58	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/13/22 23:58	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		03/10/22 11:44	03/13/22 23:58	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/13/22 23:58	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/10/22 11:44	03/13/22 23:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75		70 - 130	03/10/22 11:44	03/13/22 23:58	1
1,4-Difluorobenzene (Surr)	71		70 - 130	03/10/22 11:44	03/13/22 23:58	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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 14:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		03/08/22 14:48	03/11/22 14:18	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/08/22 14:48	03/11/22 14:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	104		70 - 130	03/08/22 14:48	03/11/22 14:18	1
o-Terphenyl (Surr)	117		70 - 130	03/08/22 14:48	03/11/22 14:18	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.7		4.98	mg/Kg			03/11/22 20:36	1

Client Sample ID: S-1, 4.5

Lab Sample ID: 880-12079-6

Date Collected: 03/04/22 11:10

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/14/22 00:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/14/22 00:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/14/22 00:23	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		03/10/22 11:44	03/14/22 00:23	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/14/22 00:23	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		03/10/22 11:44	03/14/22 00:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130	03/10/22 11:44	03/14/22 00:23	1
1,4-Difluorobenzene (Surr)	91		70 - 130	03/10/22 11:44	03/14/22 00:23	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-1, 4.5

Lab Sample ID: 880-12079-6

Date Collected: 03/04/22 11:10

Matrix: Solid

Date Received: 03/07/22 09:28

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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 14:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		03/08/22 14:48	03/11/22 14:40	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 14:48	03/11/22 14:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	105		70 - 130			03/08/22 14:48	03/11/22 14:40	1
o-Terphenyl (Surr)	118		70 - 130			03/08/22 14:48	03/11/22 14:40	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.6		4.98	mg/Kg			03/11/22 20:44	1

Client Sample ID: S-2, 0.5

Lab Sample ID: 880-12079-7

Date Collected: 03/04/22 11:20

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		03/10/22 11:44	03/14/22 00:50	1
Toluene	<0.00198	U	0.00198	mg/Kg		03/10/22 11:44	03/14/22 00:50	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		03/10/22 11:44	03/14/22 00:50	1
m,p-Xylenes	<0.00396	U	0.00396	mg/Kg		03/10/22 11:44	03/14/22 00:50	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		03/10/22 11:44	03/14/22 00:50	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		03/10/22 11:44	03/14/22 00:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			03/10/22 11:44	03/14/22 00:50	1
1,4-Difluorobenzene (Surr)	102		70 - 130			03/10/22 11:44	03/14/22 00:50	1

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			03/14/22 11:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1530		49.9	mg/Kg			03/14/22 10:01	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	1050		49.9	mg/Kg		03/08/22 14:48	03/11/22 15:01	1
Diesel Range Organics (Over C10-C28)	484	*1	49.9	mg/Kg		03/08/22 14:48	03/11/22 15:01	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-2, 0.5

Lab Sample ID: 880-12079-7

Date Collected: 03/04/22 11:20

Matrix: Solid

Date Received: 03/07/22 09:28

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		03/08/22 14:48	03/11/22 15:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	113		70 - 130			03/08/22 14:48	03/11/22 15:01	1
o-Terphenyl (Surr)	131	S1+	70 - 130			03/08/22 14:48	03/11/22 15:01	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.0		5.05	mg/Kg			03/12/22 01:10	1

Client Sample ID: S-2,1

Lab Sample ID: 880-12079-8

Date Collected: 03/04/22 11:22

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		03/10/22 11:44	03/14/22 01:16	1
Toluene	<0.00201	U	0.00201	mg/Kg		03/10/22 11:44	03/14/22 01:16	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		03/10/22 11:44	03/14/22 01:16	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		03/10/22 11:44	03/14/22 01:16	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		03/10/22 11:44	03/14/22 01:16	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		03/10/22 11:44	03/14/22 01:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			03/10/22 11:44	03/14/22 01:16	1
1,4-Difluorobenzene (Surr)	103		70 - 130			03/10/22 11:44	03/14/22 01:16	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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 15:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		03/08/22 14:48	03/11/22 15:45	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/08/22 14:48	03/11/22 15:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	90		70 - 130			03/08/22 14:48	03/11/22 15:45	1
o-Terphenyl (Surr)	98		70 - 130			03/08/22 14:48	03/11/22 15:45	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.9		4.99	mg/Kg			03/12/22 01:28	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-2, 2

Lab Sample ID: 880-12079-9

Date Collected: 03/04/22 11:24

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/14/22 01:43	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/14/22 01:43	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/14/22 01:43	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		03/10/22 11:44	03/14/22 01:43	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/14/22 01:43	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/10/22 11:44	03/14/22 01:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	03/10/22 11:44	03/14/22 01:43	1
1,4-Difluorobenzene (Surr)	107		70 - 130	03/10/22 11:44	03/14/22 01:43	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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 16:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		03/08/22 14:48	03/11/22 16:08	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 14:48	03/11/22 16:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	83		70 - 130	03/08/22 14:48	03/11/22 16:08	1
o-Terphenyl (Surr)	89		70 - 130	03/08/22 14:48	03/11/22 16:08	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.55		4.98	mg/Kg			03/12/22 01:34	1

Client Sample ID: S-2, 3

Lab Sample ID: 880-12079-10

Date Collected: 03/04/22 11:26

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/14/22 02:09	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/14/22 02:09	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/14/22 02:09	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		03/10/22 11:44	03/14/22 02:09	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		03/10/22 11:44	03/14/22 02:09	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/10/22 11:44	03/14/22 02:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	03/10/22 11:44	03/14/22 02:09	1
1,4-Difluorobenzene (Surr)	95		70 - 130	03/10/22 11:44	03/14/22 02:09	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-2, 3

Lab Sample ID: 880-12079-10

Date Collected: 03/04/22 11:26

Matrix: Solid

Date Received: 03/07/22 09:28

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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 16:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		03/08/22 14:48	03/11/22 16:29	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 14:48	03/11/22 16:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	105		70 - 130			03/08/22 14:48	03/11/22 16:29	1
o-Terphenyl (Surr)	117		70 - 130			03/08/22 14:48	03/11/22 16:29	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.4		5.02	mg/Kg			03/12/22 01:40	1

Client Sample ID: S-2, 4

Lab Sample ID: 880-12079-11

Date Collected: 03/04/22 11:28

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		03/10/22 12:54	03/11/22 20:05	1
Toluene	<0.00201	U	0.00201	mg/Kg		03/10/22 12:54	03/11/22 20:05	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		03/10/22 12:54	03/11/22 20:05	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		03/10/22 12:54	03/11/22 20:05	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		03/10/22 12:54	03/11/22 20:05	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		03/10/22 12:54	03/11/22 20:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130			03/10/22 12:54	03/11/22 20:05	1
1,4-Difluorobenzene (Surr)	104		70 - 130			03/10/22 12:54	03/11/22 20:05	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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 17:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		03/08/22 14:48	03/11/22 17:12	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-2, 4

Lab Sample ID: 880-12079-11

Date Collected: 03/04/22 11:28

Matrix: Solid

Date Received: 03/07/22 09:28

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		03/08/22 14:48	03/11/22 17:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	109		70 - 130			03/08/22 14:48	03/11/22 17:12	1
o-Terphenyl (Surr)	122		70 - 130			03/08/22 14:48	03/11/22 17:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.3		4.98	mg/Kg			03/12/22 01:45	1

Client Sample ID: S-2, 5

Lab Sample ID: 880-12079-12

Date Collected: 03/04/22 11:30

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/10/22 12:54	03/11/22 20:32	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/10/22 12:54	03/11/22 20:32	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/10/22 12:54	03/11/22 20:32	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		03/10/22 12:54	03/11/22 20:32	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		03/10/22 12:54	03/11/22 20:32	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/10/22 12:54	03/11/22 20:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130			03/10/22 12:54	03/11/22 20:32	1
1,4-Difluorobenzene (Surr)	97		70 - 130			03/10/22 12:54	03/11/22 20:32	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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 17:34	1
Diesel Range Organics (Over C10-C28)	<49.8	U *1	49.8	mg/Kg		03/08/22 14:48	03/11/22 17:34	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		03/08/22 14:48	03/11/22 17:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	100		70 - 130			03/08/22 14:48	03/11/22 17:34	1
o-Terphenyl (Surr)	107		70 - 130			03/08/22 14:48	03/11/22 17:34	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.7		4.99	mg/Kg			03/12/22 02:03	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-3, 0.5

Lab Sample ID: 880-12079-13

Date Collected: 03/04/22 11:40

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 20:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 20:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 20:59	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		03/10/22 12:54	03/11/22 20:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 20:59	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/10/22 12:54	03/11/22 20:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	03/10/22 12:54	03/11/22 20:59	1
1,4-Difluorobenzene (Surr)	114		70 - 130	03/10/22 12:54	03/11/22 20:59	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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 17:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		03/08/22 14:48	03/11/22 17:56	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 14:48	03/11/22 17:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	98		70 - 130	03/08/22 14:48	03/11/22 17:56	1
o-Terphenyl (Surr)	110		70 - 130	03/08/22 14:48	03/11/22 17:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	66.4		4.96	mg/Kg			03/12/22 02:09	1

Client Sample ID: S-3, 1

Lab Sample ID: 880-12079-14

Date Collected: 03/04/22 11:42

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		03/10/22 12:54	03/11/22 21:26	1
Toluene	<0.00198	U	0.00198	mg/Kg		03/10/22 12:54	03/11/22 21:26	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		03/10/22 12:54	03/11/22 21:26	1
m,p-Xylenes	<0.00397	U	0.00397	mg/Kg		03/10/22 12:54	03/11/22 21:26	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		03/10/22 12:54	03/11/22 21:26	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		03/10/22 12:54	03/11/22 21:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	03/10/22 12:54	03/11/22 21:26	1
1,4-Difluorobenzene (Surr)	113		70 - 130	03/10/22 12:54	03/11/22 21:26	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-3, 1

Lab Sample ID: 880-12079-14

Date Collected: 03/04/22 11:42

Matrix: Solid

Date Received: 03/07/22 09:28

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 18:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		03/08/22 14:48	03/11/22 18:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 14:48	03/11/22 18:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	98		70 - 130			03/08/22 14:48	03/11/22 18:17	1
o-Terphenyl (Surr)	109		70 - 130			03/08/22 14:48	03/11/22 18:17	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.2		5.00	mg/Kg			03/12/22 02:15	1

Client Sample ID: S-3, 2

Lab Sample ID: 880-12079-15

Date Collected: 03/04/22 11:44

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/10/22 12:54	03/11/22 21:53	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/10/22 12:54	03/11/22 21:53	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/10/22 12:54	03/11/22 21:53	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		03/10/22 12:54	03/11/22 21:53	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		03/10/22 12:54	03/11/22 21:53	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/10/22 12:54	03/11/22 21:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			03/10/22 12:54	03/11/22 21:53	1
1,4-Difluorobenzene (Surr)	112		70 - 130			03/10/22 12:54	03/11/22 21:53	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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 18:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		03/08/22 14:48	03/11/22 18:39	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-3, 2

Lab Sample ID: 880-12079-15

Date Collected: 03/04/22 11:44

Matrix: Solid

Date Received: 03/07/22 09:28

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		03/08/22 14:48	03/11/22 18:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	92		70 - 130			03/08/22 14:48	03/11/22 18:39	1
o-Terphenyl (Surr)	102		70 - 130			03/08/22 14:48	03/11/22 18:39	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.6		4.95	mg/Kg			03/12/22 02:21	1

Client Sample ID: S-3, 3

Lab Sample ID: 880-12079-16

Date Collected: 03/04/22 11:46

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 22:20	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 22:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 22:20	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		03/10/22 12:54	03/11/22 22:20	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 22:20	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/10/22 12:54	03/11/22 22:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130			03/10/22 12:54	03/11/22 22:20	1
1,4-Difluorobenzene (Surr)	116		70 - 130			03/10/22 12:54	03/11/22 22:20	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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 19:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		03/08/22 14:48	03/11/22 19:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 14:48	03/11/22 19:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	88		70 - 130			03/08/22 14:48	03/11/22 19:00	1
o-Terphenyl (Surr)	97		70 - 130			03/08/22 14:48	03/11/22 19:00	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.96		5.04	mg/Kg			03/12/22 02:27	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-3, 4

Lab Sample ID: 880-12079-17

Date Collected: 03/04/22 11:48

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		03/10/22 12:54	03/11/22 22:47	1
Toluene	<0.00198	U	0.00198	mg/Kg		03/10/22 12:54	03/11/22 22:47	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		03/10/22 12:54	03/11/22 22:47	1
m,p-Xylenes	<0.00396	U	0.00396	mg/Kg		03/10/22 12:54	03/11/22 22:47	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		03/10/22 12:54	03/11/22 22:47	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		03/10/22 12:54	03/11/22 22:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	03/10/22 12:54	03/11/22 22:47	1
1,4-Difluorobenzene (Surr)	116		70 - 130	03/10/22 12:54	03/11/22 22:47	1

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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 19:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		03/08/22 14:48	03/11/22 19:22	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/08/22 14:48	03/11/22 19:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	96		70 - 130	03/08/22 14:48	03/11/22 19:22	1
o-Terphenyl (Surr)	106		70 - 130	03/08/22 14:48	03/11/22 19:22	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48.7		4.95	mg/Kg			03/12/22 10:31	1

Client Sample ID: S-3, 4.5

Lab Sample ID: 880-12079-18

Date Collected: 03/04/22 11:50

Matrix: Solid

Date Received: 03/07/22 09:28

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		03/10/22 12:54	03/11/22 23:14	1
Toluene	<0.00201	U	0.00201	mg/Kg		03/10/22 12:54	03/11/22 23:14	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		03/10/22 12:54	03/11/22 23:14	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		03/10/22 12:54	03/11/22 23:14	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		03/10/22 12:54	03/11/22 23:14	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		03/10/22 12:54	03/11/22 23:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130	03/10/22 12:54	03/11/22 23:14	1
1,4-Difluorobenzene (Surr)	102		70 - 130	03/10/22 12:54	03/11/22 23:14	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-3, 4.5

Lab Sample ID: 880-12079-18

Date Collected: 03/04/22 11:50

Matrix: Solid

Date Received: 03/07/22 09:28

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			03/14/22 11:07	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			03/14/22 10:01	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		03/08/22 14:48	03/11/22 19:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		03/08/22 14:48	03/11/22 19:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 14:48	03/11/22 19:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	83		70 - 130			03/08/22 14:48	03/11/22 19:43	1
o-Terphenyl (Surr)	90		70 - 130			03/08/22 14:48	03/11/22 19:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.1		5.00	mg/Kg			03/13/22 07:04	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

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)
880-12078-A-1-D MS	Matrix Spike	109	106
880-12078-A-1-E MSD	Matrix Spike Duplicate	193371 S1+	360554 S1+
880-12079-1	S-1, 0.5	108	99
880-12079-2	S-1, 1	97	111
880-12079-3	S-1, 2	122	86
880-12079-4	S-1, 3	109	114
880-12079-5	S-1, 4	75	71
880-12079-6	S-1, 4.5	81	91
880-12079-7	S-2, 0.5	106	102
880-12079-8	S-2, 1	107	103
880-12079-9	S-2, 2	108	107
880-12079-10	S-2, 3	115	95
880-12079-11	S-2, 4	91	104
880-12079-12	S-2, 5	96	97
880-12079-13	S-3, 0.5	94	114
880-12079-14	S-3, 1	98	113
880-12079-15	S-3, 2	102	112
880-12079-16	S-3, 3	96	116
880-12079-17	S-3, 4	93	116
880-12079-18	S-3, 4.5	81	102
890-2050-A-1-G MS	Matrix Spike	76	127
890-2050-A-1-H MSD	Matrix Spike Duplicate	19 S1-	88
LCS 880-21133/1-A	Lab Control Sample	94	115
LCS 880-21145/1-A	Lab Control Sample	85	127
LCSD 880-21011/2-A	Lab Control Sample Dup	93	113
LCSD 880-21133/2-A	Lab Control Sample Dup	102	132 S1+
LCSD 880-21145/2-A	Lab Control Sample Dup	89	116
MB 880-21011/5-A	Method Blank	56 S1-	110
MB 880-21133/5-A	Method Blank	58 S1-	111
MB 880-21145/5-A	Method Blank	53 S1-	112

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)
880-12079-1	S-1, 0.5	111	129
880-12079-1 MS	S-1, 0.5	45 S1-	8 S1-
880-12079-1 MSD	S-1, 0.5	50 S1-	9 S1-
880-12079-2	S-1, 1	125	146 S1+
880-12079-3	S-1, 2	81	87
880-12079-4	S-1, 3	93	103
880-12079-5	S-1, 4	104	117
880-12079-6	S-1, 4.5	105	118
880-12079-7	S-2, 0.5	113	131 S1+

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Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

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)
880-12079-8	S-2, 1	90	98
880-12079-9	S-2, 2	83	89
880-12079-10	S-2, 3	105	117
880-12079-11	S-2, 4	109	122
880-12079-12	S-2, 5	100	107
880-12079-13	S-3, 0.5	98	110
880-12079-14	S-3, 1	98	109
880-12079-15	S-3, 2	92	102
880-12079-16	S-3, 3	88	97
880-12079-17	S-3, 4	96	106
880-12079-18	S-3, 4.5	83	90
Surrogate Legend			
1CO = 1-Chlorooctane (Surr)			
OTPH = o-Terphenyl (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	1CO2 (70-130)	OTPH2 (70-130)
LCS 880-21160/2-A	Lab Control Sample	84	89
LCSD 880-21160/3-A	Lab Control Sample Dup	107	115
MB 880-21160/1-A	Method Blank	100	114
Surrogate Legend			
1CO = 1-Chlorooctane (Surr)			
OTPH = o-Terphenyl (Surr)			

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-21011/5-A

Matrix: Solid

Analysis Batch: 21405

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21011

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/10/22 09:50	03/12/22 19:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/10/22 09:50	03/12/22 19:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/10/22 09:50	03/12/22 19:04	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		03/10/22 09:50	03/12/22 19:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/10/22 09:50	03/12/22 19:04	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/10/22 09:50	03/12/22 19:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	56	S1-	70 - 130	03/10/22 09:50	03/12/22 19:04	1
1,4-Difluorobenzene (Surr)	110		70 - 130	03/10/22 09:50	03/12/22 19:04	1

Lab Sample ID: LCSD 880-21011/2-A

Matrix: Solid

Analysis Batch: 21405

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21011

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1168		mg/Kg		117	70 - 130	NaN	35
Toluene	0.100	0.1066		mg/Kg		107	70 - 130	NaN	35
Ethylbenzene	0.100	0.1141		mg/Kg		114	70 - 130	NaN	35
m,p-Xylenes	0.200	0.2353		mg/Kg		118	70 - 130	NaN	35
o-Xylene	0.100	0.1152		mg/Kg		115	70 - 130	NaN	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: MB 880-21133/5-A

Matrix: Solid

Analysis Batch: 21405

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21133

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 15:50	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 15:50	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 15:50	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		03/10/22 11:44	03/13/22 15:50	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/10/22 11:44	03/13/22 15:50	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/10/22 11:44	03/13/22 15:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	58	S1-	70 - 130	03/10/22 11:44	03/13/22 15:50	1
1,4-Difluorobenzene (Surr)	111		70 - 130	03/10/22 11:44	03/13/22 15:50	1

Lab Sample ID: LCS 880-21133/1-A

Matrix: Solid

Analysis Batch: 21405

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21133

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1130		mg/Kg		113	70 - 130

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

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

Lab Sample ID: LCS 880-21133/1-A

Matrix: Solid

Analysis Batch: 21405

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21133

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	0.100	0.1030		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.1078		mg/Kg		108	70 - 130
m,p-Xylenes	0.200	0.2202		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1065		mg/Kg		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		70 - 130
1,4-Difluorobenzene (Surr)	115		70 - 130

Lab Sample ID: LCSD 880-21133/2-A

Matrix: Solid

Analysis Batch: 21405

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21133

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.1211		mg/Kg		121	70 - 130	7	35
Toluene	0.100	0.09838		mg/Kg		98	70 - 130	5	35
Ethylbenzene	0.100	0.09674		mg/Kg		97	70 - 130	11	35
m,p-Xylenes	0.200	0.1877		mg/Kg		94	70 - 130	16	35
o-Xylene	0.100	0.1063		mg/Kg		106	70 - 130	0	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	132	S1+	70 - 130

Lab Sample ID: 880-12078-A-1-D MS

Matrix: Solid

Analysis Batch: 21405

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 21133

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U F1	0.101	0.05482	F1	mg/Kg		54	70 - 130
Toluene	<0.00199	U F2 F1	0.101	0.04624	F1	mg/Kg		46	70 - 130
Ethylbenzene	<0.00199	U F2 F1	0.101	0.04008	F1	mg/Kg		40	70 - 130
m,p-Xylenes	<0.00398	U F2 F1	0.202	0.06268	F1	mg/Kg		31	70 - 130
o-Xylene	<0.00199	U F2 F1	0.101	0.05315	F1	mg/Kg		52	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 880-12078-A-1-E MSD

Matrix: Solid

Analysis Batch: 21405

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 21133

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	<0.00199	U F1	0.100	0.04908	F1	mg/Kg		49	70 - 130	11	35
Toluene	<0.00199	U F2 F1	0.100	0.006206	F2 F1	mg/Kg		6	70 - 130	153	35
m,p-Xylenes	<0.00398	U F2 F1	0.200	0.2287	F2	mg/Kg		114	70 - 130	114	35
o-Xylene	<0.00199	U F2 F1	0.100	0.005265	F2 F1	mg/Kg		5	70 - 130	164	35

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

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

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	193371	S1+	70 - 130
1,4-Difluorobenzene (Surr)	360554	S1+	70 - 130

Lab Sample ID: MB 880-21145/5-A

Matrix: Solid

Analysis Batch: 21326

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21145

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 12:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 12:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 12:51	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		03/10/22 12:54	03/11/22 12:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/10/22 12:54	03/11/22 12:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/10/22 12:54	03/11/22 12:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	53	S1-	70 - 130	03/10/22 12:54	03/11/22 12:51	1
1,4-Difluorobenzene (Surr)	112		70 - 130	03/10/22 12:54	03/11/22 12:51	1

Lab Sample ID: LCS 880-21145/1-A

Matrix: Solid

Analysis Batch: 21326

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21145

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1084		mg/Kg		108	70 - 130
Toluene	0.100	0.08619		mg/Kg		86	70 - 130
Ethylbenzene	0.100	0.09313		mg/Kg		93	70 - 130
m,p-Xylenes	0.200	0.1908		mg/Kg		95	70 - 130
o-Xylene	0.100	0.09710		mg/Kg		97	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		70 - 130
1,4-Difluorobenzene (Surr)	127		70 - 130

Lab Sample ID: LCSD 880-21145/2-A

Matrix: Solid

Analysis Batch: 21326

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21145

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09543		mg/Kg		95	70 - 130	13	35
Toluene	0.100	0.08876		mg/Kg		89	70 - 130	3	35
Ethylbenzene	0.100	0.09559		mg/Kg		96	70 - 130	3	35
m,p-Xylenes	0.200	0.1954		mg/Kg		98	70 - 130	2	35
o-Xylene	0.100	0.09754		mg/Kg		98	70 - 130	0	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		70 - 130
1,4-Difluorobenzene (Surr)	116		70 - 130

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

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

Lab Sample ID: 890-2050-A-1-G MS

Matrix: Solid

Analysis Batch: 21326

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 21145

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00198	U F1 F2	0.0996	0.05479	F1	mg/Kg		55	70 - 130
Toluene	<0.00198	U F1 F2	0.0996	0.04365	F1	mg/Kg		43	70 - 130
Ethylbenzene	<0.00198	U F1 F2	0.0996	0.04198	F1	mg/Kg		42	70 - 130
m,p-Xylenes	<0.00397	U F1	0.199	0.08405	F1	mg/Kg		42	70 - 130
o-Xylene	<0.00198	U F1 F2	0.0996	0.04196	F1	mg/Kg		42	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	76		70 - 130
1,4-Difluorobenzene (Surr)	127		70 - 130

Lab Sample ID: 890-2050-A-1-H MSD

Matrix: Solid

Analysis Batch: 21326

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 21145

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U F1 F2	0.0996	0.01188	F1 F2	mg/Kg		12	70 - 130	129	35
Toluene	<0.00198	U F1 F2	0.0996	0.02180	F1 F2	mg/Kg		21	70 - 130	67	35
Ethylbenzene	<0.00198	U F1 F2	0.0996	0.007720	F1 F2	mg/Kg		7	70 - 130	138	35
m,p-Xylenes	<0.00397	U F1	0.199	0.07198	F1	mg/Kg		36	70 - 130	15	35
o-Xylene	<0.00198	U F1 F2	0.0996	0.01342	F1 F2	mg/Kg		13	70 - 130	103	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	19	S1-	70 - 130
1,4-Difluorobenzene (Surr)	88		70 - 130

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

Lab Sample ID: MB 880-21160/1-A

Matrix: Solid

Analysis Batch: 21379

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21160

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		03/08/22 14:48	03/11/22 11:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/08/22 14:48	03/11/22 11:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/08/22 14:48	03/11/22 11:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	100		70 - 130	03/08/22 14:48	03/11/22 11:04	1
o-Terphenyl (Surr)	114		70 - 130	03/08/22 14:48	03/11/22 11:04	1

Lab Sample ID: LCS 880-21160/2-A

Matrix: Solid

Analysis Batch: 21379

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21160

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	816.9		mg/Kg		82	70 - 130

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

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

Lab Sample ID: LCS 880-21160/2-A

Matrix: Solid

Analysis Batch: 21379

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21160

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (Over C10-C28)			1000	717.8		mg/Kg		72	70 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits								
1-Chlorooctane (Surr)	84		70 - 130								
o-Terphenyl (Surr)	89		70 - 130								

Lab Sample ID: LCSD 880-21160/3-A

Matrix: Solid

Analysis Batch: 21379

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21160

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1003		mg/Kg		100	70 - 130	20	20
Diesel Range Organics (Over C10-C28)			1000	923.7	*1	mg/Kg		92	70 - 130	25	20

Lab Sample ID: 880-12079-1 MS

Matrix: Solid

Analysis Batch: 21379

Client Sample ID: S-1, 0.5

Prep Type: Total/NA

Prep Batch: 21160

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec.		
	Result	Qualifier	Added	Result	Qualifier			Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1066		mg/Kg		105	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U *1	998	1108		mg/Kg		106	70 - 130	
Surrogate	MS %Recovery	MS Qualifier	Limits							
1-Chlorooctane (Surr)	45	S1-	70 - 130							
o-Terphenyl (Surr)	8	S1-	70 - 130							

Lab Sample ID: 880-12079-1 MSD

Matrix: Solid

Analysis Batch: 21379

Client Sample ID: S-1, 0.5

Prep Type: Total/NA

Prep Batch: 21160

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1242		mg/Kg		122	70 - 130	15	20
Diesel Range Organics (Over C10-C28)	<49.9	U *1	998	1339		mg/Kg		130	70 - 130	19	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-21036/1-A

Matrix: Solid

Analysis Batch: 21205

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			03/11/22 08:43	1

Lab Sample ID: LCS 880-21036/2-A

Matrix: Solid

Analysis Batch: 21205

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	241.0		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-21036/3-A

Matrix: Solid

Analysis Batch: 21205

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	239.6		mg/Kg		96	90 - 110	1	20

Lab Sample ID: 880-12077-A-3-C MS

Matrix: Solid

Analysis Batch: 21205

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	222		252	481.5		mg/Kg		103	90 - 110

Lab Sample ID: 880-12077-A-3-D MSD

Matrix: Solid

Analysis Batch: 21205

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	222		252	472.2		mg/Kg		99	90 - 110	2	20

Lab Sample ID: MB 880-21129/1-A

Matrix: Solid

Analysis Batch: 21213

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			03/12/22 00:52	1

Lab Sample ID: LCS 880-21129/2-A

Matrix: Solid

Analysis Batch: 21213

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	225.3		mg/Kg		90	90 - 110

Lab Sample ID: LCSD 880-21129/3-A

Matrix: Solid

Analysis Batch: 21213

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	255.8		mg/Kg		102	90 - 110	13	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-12079-7 MS

Matrix: Solid

Analysis Batch: 21213

Client Sample ID: S-2, 0.5

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	24.0		253	290.4		mg/Kg		105	90 - 110

Lab Sample ID: 880-12079-7 MSD

Matrix: Solid

Analysis Batch: 21213

Client Sample ID: S-2, 0.5

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	24.0		253	257.6		mg/Kg		93	90 - 110	12	20

Lab Sample ID: MB 880-21131/1-A

Matrix: Solid

Analysis Batch: 21435

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			03/12/22 10:14	1

Lab Sample ID: LCS 880-21131/2-A

Matrix: Solid

Analysis Batch: 21435

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	254.3		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-21131/3-A

Matrix: Solid

Analysis Batch: 21435

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	255.3		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 880-12079-17 MS

Matrix: Solid

Analysis Batch: 21435

Client Sample ID: S-3, 4

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	48.7		248	290.7		mg/Kg		98	90 - 110

Lab Sample ID: 880-12079-17 MSD

Matrix: Solid

Analysis Batch: 21435

Client Sample ID: S-3, 4

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	48.7		248	290.8		mg/Kg		98	90 - 110	0	20

Lab Sample ID: MB 880-21134/1-A

Matrix: Solid

Analysis Batch: 21439

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			03/13/22 06:46	1

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 880-21134/2-A

Matrix: Solid

Analysis Batch: 21439

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	250.9		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-21134/3-A

Matrix: Solid

Analysis Batch: 21439

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	256.8		mg/Kg		103	90 - 110	2	20

Lab Sample ID: 880-12079-18 MS

Matrix: Solid

Analysis Batch: 21439

Client Sample ID: S-3, 4.5

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.1		250	275.6		mg/Kg		105	90 - 110

Lab Sample ID: 880-12079-18 MSD

Matrix: Solid

Analysis Batch: 21439

Client Sample ID: S-3, 4.5

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12.1		250	277.3		mg/Kg		106	90 - 110	1	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

GC VOA

Prep Batch: 21011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-21011/5-A	Method Blank	Total/NA	Solid	5035	
LCSD 880-21011/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 21133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-1	S-1, 0.5	Total/NA	Solid	5035	
880-12079-2	S-1, 1	Total/NA	Solid	5035	
880-12079-3	S-1, 2	Total/NA	Solid	5035	
880-12079-4	S-1, 3	Total/NA	Solid	5035	
880-12079-5	S-1, 4	Total/NA	Solid	5035	
880-12079-6	S-1, 4.5	Total/NA	Solid	5035	
880-12079-7	S-2, 0.5	Total/NA	Solid	5035	
880-12079-8	S-2, 1	Total/NA	Solid	5035	
880-12079-9	S-2, 2	Total/NA	Solid	5035	
880-12079-10	S-2, 3	Total/NA	Solid	5035	
MB 880-21133/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-21133/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-21133/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-12078-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-12078-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 21145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-11	S-2, 4	Total/NA	Solid	5035	
880-12079-12	S-2, 5	Total/NA	Solid	5035	
880-12079-13	S-3, 0.5	Total/NA	Solid	5035	
880-12079-14	S-3, 1	Total/NA	Solid	5035	
880-12079-15	S-3, 2	Total/NA	Solid	5035	
880-12079-16	S-3, 3	Total/NA	Solid	5035	
880-12079-17	S-3, 4	Total/NA	Solid	5035	
880-12079-18	S-3, 4.5	Total/NA	Solid	5035	
MB 880-21145/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-21145/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-21145/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2050-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2050-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 21326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-11	S-2, 4	Total/NA	Solid	8021B	21145
880-12079-12	S-2, 5	Total/NA	Solid	8021B	21145
880-12079-13	S-3, 0.5	Total/NA	Solid	8021B	21145
880-12079-14	S-3, 1	Total/NA	Solid	8021B	21145
880-12079-15	S-3, 2	Total/NA	Solid	8021B	21145
880-12079-16	S-3, 3	Total/NA	Solid	8021B	21145
880-12079-17	S-3, 4	Total/NA	Solid	8021B	21145
880-12079-18	S-3, 4.5	Total/NA	Solid	8021B	21145
MB 880-21145/5-A	Method Blank	Total/NA	Solid	8021B	21145
LCS 880-21145/1-A	Lab Control Sample	Total/NA	Solid	8021B	21145
LCSD 880-21145/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	21145
890-2050-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	21145

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QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

GC VOA (Continued)

Analysis Batch: 21326 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2050-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	21145

Analysis Batch: 21405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-1	S-1, 0.5	Total/NA	Solid	8021B	21133
880-12079-2	S-1, 1	Total/NA	Solid	8021B	21133
880-12079-3	S-1, 2	Total/NA	Solid	8021B	21133
880-12079-4	S-1, 3	Total/NA	Solid	8021B	21133
880-12079-5	S-1, 4	Total/NA	Solid	8021B	21133
880-12079-6	S-1, 4.5	Total/NA	Solid	8021B	21133
880-12079-7	S-2, 0.5	Total/NA	Solid	8021B	21133
880-12079-8	S-2, 1	Total/NA	Solid	8021B	21133
880-12079-9	S-2, 2	Total/NA	Solid	8021B	21133
880-12079-10	S-2, 3	Total/NA	Solid	8021B	21133
MB 880-21011/5-A	Method Blank	Total/NA	Solid	8021B	21011
MB 880-21133/5-A	Method Blank	Total/NA	Solid	8021B	21133
LCS 880-21133/1-A	Lab Control Sample	Total/NA	Solid	8021B	21133
LCSD 880-21011/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	21011
LCSD 880-21133/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	21133
880-12078-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	21133
880-12078-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	21133

Analysis Batch: 21522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-1	S-1, 0.5	Total/NA	Solid	Total BTEX	
880-12079-2	S-1, 1	Total/NA	Solid	Total BTEX	
880-12079-3	S-1, 2	Total/NA	Solid	Total BTEX	
880-12079-4	S-1, 3	Total/NA	Solid	Total BTEX	
880-12079-5	S-1, 4	Total/NA	Solid	Total BTEX	
880-12079-6	S-1, 4.5	Total/NA	Solid	Total BTEX	
880-12079-7	S-2, 0.5	Total/NA	Solid	Total BTEX	
880-12079-8	S-2, 1	Total/NA	Solid	Total BTEX	
880-12079-9	S-2, 2	Total/NA	Solid	Total BTEX	
880-12079-10	S-2, 3	Total/NA	Solid	Total BTEX	
880-12079-11	S-2, 4	Total/NA	Solid	Total BTEX	
880-12079-12	S-2, 5	Total/NA	Solid	Total BTEX	
880-12079-13	S-3, 0.5	Total/NA	Solid	Total BTEX	
880-12079-14	S-3, 1	Total/NA	Solid	Total BTEX	
880-12079-15	S-3, 2	Total/NA	Solid	Total BTEX	
880-12079-16	S-3, 3	Total/NA	Solid	Total BTEX	
880-12079-17	S-3, 4	Total/NA	Solid	Total BTEX	
880-12079-18	S-3, 4.5	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 21160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-1	S-1, 0.5	Total/NA	Solid	8015NM Prep	
880-12079-2	S-1, 1	Total/NA	Solid	8015NM Prep	
880-12079-3	S-1, 2	Total/NA	Solid	8015NM Prep	
880-12079-4	S-1, 3	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

GC Semi VOA (Continued)

Prep Batch: 21160 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-5	S-1, 4	Total/NA	Solid	8015NM Prep	
880-12079-6	S-1, 4.5	Total/NA	Solid	8015NM Prep	
880-12079-7	S-2, 0.5	Total/NA	Solid	8015NM Prep	
880-12079-8	S-2, 1	Total/NA	Solid	8015NM Prep	
880-12079-9	S-2, 2	Total/NA	Solid	8015NM Prep	
880-12079-10	S-2, 3	Total/NA	Solid	8015NM Prep	
880-12079-11	S-2, 4	Total/NA	Solid	8015NM Prep	
880-12079-12	S-2, 5	Total/NA	Solid	8015NM Prep	
880-12079-13	S-3, 0.5	Total/NA	Solid	8015NM Prep	
880-12079-14	S-3, 1	Total/NA	Solid	8015NM Prep	
880-12079-15	S-3, 2	Total/NA	Solid	8015NM Prep	
880-12079-16	S-3, 3	Total/NA	Solid	8015NM Prep	
880-12079-17	S-3, 4	Total/NA	Solid	8015NM Prep	
880-12079-18	S-3, 4.5	Total/NA	Solid	8015NM Prep	
MB 880-21160/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-21160/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-21160/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-12079-1 MS	S-1, 0.5	Total/NA	Solid	8015NM Prep	
880-12079-1 MSD	S-1, 0.5	Total/NA	Solid	8015NM Prep	

Analysis Batch: 21379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-1	S-1, 0.5	Total/NA	Solid	8015B NM	21160
880-12079-2	S-1, 1	Total/NA	Solid	8015B NM	21160
880-12079-3	S-1, 2	Total/NA	Solid	8015B NM	21160
880-12079-4	S-1, 3	Total/NA	Solid	8015B NM	21160
880-12079-5	S-1, 4	Total/NA	Solid	8015B NM	21160
880-12079-6	S-1, 4.5	Total/NA	Solid	8015B NM	21160
880-12079-7	S-2, 0.5	Total/NA	Solid	8015B NM	21160
880-12079-8	S-2, 1	Total/NA	Solid	8015B NM	21160
880-12079-9	S-2, 2	Total/NA	Solid	8015B NM	21160
880-12079-10	S-2, 3	Total/NA	Solid	8015B NM	21160
880-12079-11	S-2, 4	Total/NA	Solid	8015B NM	21160
880-12079-12	S-2, 5	Total/NA	Solid	8015B NM	21160
880-12079-13	S-3, 0.5	Total/NA	Solid	8015B NM	21160
880-12079-14	S-3, 1	Total/NA	Solid	8015B NM	21160
880-12079-15	S-3, 2	Total/NA	Solid	8015B NM	21160
880-12079-16	S-3, 3	Total/NA	Solid	8015B NM	21160
880-12079-17	S-3, 4	Total/NA	Solid	8015B NM	21160
880-12079-18	S-3, 4.5	Total/NA	Solid	8015B NM	21160
MB 880-21160/1-A	Method Blank	Total/NA	Solid	8015B NM	21160
LCS 880-21160/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	21160
LCSD 880-21160/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	21160
880-12079-1 MS	S-1, 0.5	Total/NA	Solid	8015B NM	21160
880-12079-1 MSD	S-1, 0.5	Total/NA	Solid	8015B NM	21160

Analysis Batch: 21515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-1	S-1, 0.5	Total/NA	Solid	8015 NM	
880-12079-2	S-1, 1	Total/NA	Solid	8015 NM	
880-12079-3	S-1, 2	Total/NA	Solid	8015 NM	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

GC Semi VOA (Continued)

Analysis Batch: 21515 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-4	S-1, 3	Total/NA	Solid	8015 NM	
880-12079-5	S-1, 4	Total/NA	Solid	8015 NM	
880-12079-6	S-1, 4.5	Total/NA	Solid	8015 NM	
880-12079-7	S-2, 0.5	Total/NA	Solid	8015 NM	
880-12079-8	S-2, 1	Total/NA	Solid	8015 NM	
880-12079-9	S-2, 2	Total/NA	Solid	8015 NM	
880-12079-10	S-2, 3	Total/NA	Solid	8015 NM	
880-12079-11	S-2, 4	Total/NA	Solid	8015 NM	
880-12079-12	S-2, 5	Total/NA	Solid	8015 NM	
880-12079-13	S-3, 0.5	Total/NA	Solid	8015 NM	
880-12079-14	S-3, 1	Total/NA	Solid	8015 NM	
880-12079-15	S-3, 2	Total/NA	Solid	8015 NM	
880-12079-16	S-3, 3	Total/NA	Solid	8015 NM	
880-12079-17	S-3, 4	Total/NA	Solid	8015 NM	
880-12079-18	S-3, 4.5	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 21036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-1	S-1, 0.5	Soluble	Solid	DI Leach	
880-12079-2	S-1, 1	Soluble	Solid	DI Leach	
880-12079-3	S-1, 2	Soluble	Solid	DI Leach	
880-12079-4	S-1, 3	Soluble	Solid	DI Leach	
880-12079-5	S-1, 4	Soluble	Solid	DI Leach	
880-12079-6	S-1, 4.5	Soluble	Solid	DI Leach	
MB 880-21036/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21036/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21036/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12077-A-3-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-12077-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 21129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-7	S-2, 0.5	Soluble	Solid	DI Leach	
880-12079-8	S-2, 1	Soluble	Solid	DI Leach	
880-12079-9	S-2, 2	Soluble	Solid	DI Leach	
880-12079-10	S-2, 3	Soluble	Solid	DI Leach	
880-12079-11	S-2, 4	Soluble	Solid	DI Leach	
880-12079-12	S-2, 5	Soluble	Solid	DI Leach	
880-12079-13	S-3, 0.5	Soluble	Solid	DI Leach	
880-12079-14	S-3, 1	Soluble	Solid	DI Leach	
880-12079-15	S-3, 2	Soluble	Solid	DI Leach	
880-12079-16	S-3, 3	Soluble	Solid	DI Leach	
MB 880-21129/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21129/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21129/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12079-7 MS	S-2, 0.5	Soluble	Solid	DI Leach	
880-12079-7 MSD	S-2, 0.5	Soluble	Solid	DI Leach	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

HPLC/IC

Leach Batch: 21131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-17	S-3, 4	Soluble	Solid	DI Leach	
MB 880-21131/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21131/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21131/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12079-17 MS	S-3, 4	Soluble	Solid	DI Leach	
880-12079-17 MSD	S-3, 4	Soluble	Solid	DI Leach	

Leach Batch: 21134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-18	S-3, 4.5	Soluble	Solid	DI Leach	
MB 880-21134/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21134/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21134/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12079-18 MS	S-3, 4.5	Soluble	Solid	DI Leach	
880-12079-18 MSD	S-3, 4.5	Soluble	Solid	DI Leach	

Analysis Batch: 21205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-1	S-1, 0.5	Soluble	Solid	300.0	21036
880-12079-2	S-1, 1	Soluble	Solid	300.0	21036
880-12079-3	S-1, 2	Soluble	Solid	300.0	21036
880-12079-4	S-1, 3	Soluble	Solid	300.0	21036
880-12079-5	S-1, 4	Soluble	Solid	300.0	21036
880-12079-6	S-1, 4.5	Soluble	Solid	300.0	21036
MB 880-21036/1-A	Method Blank	Soluble	Solid	300.0	21036
LCS 880-21036/2-A	Lab Control Sample	Soluble	Solid	300.0	21036
LCSD 880-21036/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21036
880-12077-A-3-C MS	Matrix Spike	Soluble	Solid	300.0	21036
880-12077-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	21036

Analysis Batch: 21213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-7	S-2, 0.5	Soluble	Solid	300.0	21129
880-12079-8	S-2, 1	Soluble	Solid	300.0	21129
880-12079-9	S-2, 2	Soluble	Solid	300.0	21129
880-12079-10	S-2, 3	Soluble	Solid	300.0	21129
880-12079-11	S-2, 4	Soluble	Solid	300.0	21129
880-12079-12	S-2, 5	Soluble	Solid	300.0	21129
880-12079-13	S-3, 0.5	Soluble	Solid	300.0	21129
880-12079-14	S-3, 1	Soluble	Solid	300.0	21129
880-12079-15	S-3, 2	Soluble	Solid	300.0	21129
880-12079-16	S-3, 3	Soluble	Solid	300.0	21129
MB 880-21129/1-A	Method Blank	Soluble	Solid	300.0	21129
LCS 880-21129/2-A	Lab Control Sample	Soluble	Solid	300.0	21129
LCSD 880-21129/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21129
880-12079-7 MS	S-2, 0.5	Soluble	Solid	300.0	21129
880-12079-7 MSD	S-2, 0.5	Soluble	Solid	300.0	21129

Analysis Batch: 21435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-17	S-3, 4	Soluble	Solid	300.0	21131

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

HPLC/IC (Continued)

Analysis Batch: 21435 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-21131/1-A	Method Blank	Soluble	Solid	300.0	21131
LCS 880-21131/2-A	Lab Control Sample	Soluble	Solid	300.0	21131
LCSD 880-21131/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21131
880-12079-17 MS	S-3, 4	Soluble	Solid	300.0	21131
880-12079-17 MSD	S-3, 4	Soluble	Solid	300.0	21131

Analysis Batch: 21439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12079-18	S-3, 4.5	Soluble	Solid	300.0	21134
MB 880-21134/1-A	Method Blank	Soluble	Solid	300.0	21134
LCS 880-21134/2-A	Lab Control Sample	Soluble	Solid	300.0	21134
LCSD 880-21134/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21134
880-12079-18 MS	S-3, 4.5	Soluble	Solid	300.0	21134
880-12079-18 MSD	S-3, 4.5	Soluble	Solid	300.0	21134

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-1, 0.5

Lab Sample ID: 880-12079-1

Date Collected: 03/04/22 11:00

Matrix: Solid

Date Received: 03/07/22 09:28

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	21133	03/10/22 11:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 22:08	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 12:09	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21036	03/07/22 11:08	CH	XEN MID
Soluble	Analysis	300.0		1			21205	03/11/22 20:00	CH	XEN MID

Client Sample ID: S-1, 1

Lab Sample ID: 880-12079-2

Date Collected: 03/04/22 11:02

Matrix: Solid

Date Received: 03/07/22 09:28

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	21133	03/10/22 11:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 22:36	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 13:13	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21036	03/07/22 11:08	CH	XEN MID
Soluble	Analysis	300.0		1			21205	03/11/22 20:09	CH	XEN MID

Client Sample ID: S-1, 2

Lab Sample ID: 880-12079-3

Date Collected: 03/04/22 11:04

Matrix: Solid

Date Received: 03/07/22 09:28

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	21133	03/10/22 11:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 23:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 13:35	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	21036	03/07/22 11:08	CH	XEN MID
Soluble	Analysis	300.0		1			21205	03/11/22 20:18	CH	XEN MID

Client Sample ID: S-1, 3

Lab Sample ID: 880-12079-4

Date Collected: 03/04/22 11:06

Matrix: Solid

Date Received: 03/07/22 09:28

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	21133	03/10/22 11:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 23:31	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-1, 3

Lab Sample ID: 880-12079-4

Date Collected: 03/04/22 11:06

Matrix: Solid

Date Received: 03/07/22 09:28

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			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 13:57	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	21036	03/07/22 11:08	CH	XEN MID
Soluble	Analysis	300.0		1			21205	03/11/22 20:27	CH	XEN MID

Client Sample ID: S-1, 4

Lab Sample ID: 880-12079-5

Date Collected: 03/04/22 11:08

Matrix: Solid

Date Received: 03/07/22 09:28

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	21133	03/10/22 11:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 23:58	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 14:18	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21036	03/07/22 11:08	CH	XEN MID
Soluble	Analysis	300.0		1			21205	03/11/22 20:36	CH	XEN MID

Client Sample ID: S-1, 4.5

Lab Sample ID: 880-12079-6

Date Collected: 03/04/22 11:10

Matrix: Solid

Date Received: 03/07/22 09:28

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	21133	03/10/22 11:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/14/22 00:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 14:40	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21036	03/07/22 11:08	CH	XEN MID
Soluble	Analysis	300.0		1			21205	03/11/22 20:44	CH	XEN MID

Client Sample ID: S-2, 0.5

Lab Sample ID: 880-12079-7

Date Collected: 03/04/22 11:20

Matrix: Solid

Date Received: 03/07/22 09:28

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	21133	03/10/22 11:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/14/22 00:50	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 15:01	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-2, 0.5

Lab Sample ID: 880-12079-7

Date Collected: 03/04/22 11:20

Matrix: Solid

Date Received: 03/07/22 09:28

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	21129	03/08/22 11:36	SC	XEN MID
Soluble	Analysis	300.0		1			21213	03/12/22 01:10	CH	XEN MID

Client Sample ID: S-2,1

Lab Sample ID: 880-12079-8

Date Collected: 03/04/22 11:22

Matrix: Solid

Date Received: 03/07/22 09:28

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	21133	03/10/22 11:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/14/22 01:16	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 15:45	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	21129	03/08/22 11:36	SC	XEN MID
Soluble	Analysis	300.0		1			21213	03/12/22 01:28	CH	XEN MID

Client Sample ID: S-2, 2

Lab Sample ID: 880-12079-9

Date Collected: 03/04/22 11:24

Matrix: Solid

Date Received: 03/07/22 09:28

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	21133	03/10/22 11:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/14/22 01:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 16:08	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21129	03/08/22 11:36	SC	XEN MID
Soluble	Analysis	300.0		1			21213	03/12/22 01:34	CH	XEN MID

Client Sample ID: S-2, 3

Lab Sample ID: 880-12079-10

Date Collected: 03/04/22 11:26

Matrix: Solid

Date Received: 03/07/22 09:28

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	21133	03/10/22 11:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/14/22 02:09	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 16:29	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	21129	03/08/22 11:36	SC	XEN MID
Soluble	Analysis	300.0		1			21213	03/12/22 01:40	CH	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-2, 4

Lab Sample ID: 880-12079-11

Date Collected: 03/04/22 11:28

Matrix: Solid

Date Received: 03/07/22 09:28

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	21145	03/10/22 12:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21326	03/11/22 20:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 17:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21129	03/08/22 11:36	SC	XEN MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	21213	03/12/22 01:45	CH	XEN MID

Client Sample ID: S-2, 5

Lab Sample ID: 880-12079-12

Date Collected: 03/04/22 11:30

Matrix: Solid

Date Received: 03/07/22 09:28

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	21145	03/10/22 12:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21326	03/11/22 20:32	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 17:34	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	21129	03/08/22 11:36	SC	XEN MID
Soluble	Analysis	300.0		1			21213	03/12/22 02:03	CH	XEN MID

Client Sample ID: S-3, 0.5

Lab Sample ID: 880-12079-13

Date Collected: 03/04/22 11:40

Matrix: Solid

Date Received: 03/07/22 09:28

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	21145	03/10/22 12:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21326	03/11/22 20:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 17:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	21129	03/08/22 11:36	SC	XEN MID
Soluble	Analysis	300.0		1			21213	03/12/22 02:09	CH	XEN MID

Client Sample ID: S-3, 1

Lab Sample ID: 880-12079-14

Date Collected: 03/04/22 11:42

Matrix: Solid

Date Received: 03/07/22 09:28

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	21145	03/10/22 12:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21326	03/11/22 21:26	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-3, 1

Lab Sample ID: 880-12079-14

Date Collected: 03/04/22 11:42

Matrix: Solid

Date Received: 03/07/22 09:28

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			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 18:17	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21129	03/08/22 11:36	SC	XEN MID
Soluble	Analysis	300.0		1			21213	03/12/22 02:15	CH	XEN MID

Client Sample ID: S-3, 2

Lab Sample ID: 880-12079-15

Date Collected: 03/04/22 11:44

Matrix: Solid

Date Received: 03/07/22 09:28

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	21145	03/10/22 12:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21326	03/11/22 21:53	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 18:39	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	21129	03/08/22 11:36	SC	XEN MID
Soluble	Analysis	300.0		1			21213	03/12/22 02:21	CH	XEN MID

Client Sample ID: S-3, 3

Lab Sample ID: 880-12079-16

Date Collected: 03/04/22 11:46

Matrix: Solid

Date Received: 03/07/22 09:28

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	21145	03/10/22 12:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21326	03/11/22 22:20	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 19:00	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	21129	03/08/22 11:36	SC	XEN MID
Soluble	Analysis	300.0		1			21213	03/12/22 02:27	CH	XEN MID

Client Sample ID: S-3, 4

Lab Sample ID: 880-12079-17

Date Collected: 03/04/22 11:48

Matrix: Solid

Date Received: 03/07/22 09:28

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	21145	03/10/22 12:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21326	03/11/22 22:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 19:22	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Client Sample ID: S-3, 4

Lab Sample ID: 880-12079-17

Date Collected: 03/04/22 11:48

Matrix: Solid

Date Received: 03/07/22 09:28

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	21131	03/08/22 11:39	SC	XEN MID
Soluble	Analysis	300.0		1			21435	03/12/22 10:31	CH	XEN MID

Client Sample ID: S-3, 4.5

Lab Sample ID: 880-12079-18

Date Collected: 03/04/22 11:50

Matrix: Solid

Date Received: 03/07/22 09:28

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	21145	03/10/22 12:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21326	03/11/22 23:14	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21522	03/14/22 11:07	MR	XEN MID
Total/NA	Analysis	8015 NM		1			21515	03/14/22 10:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	21160	03/08/22 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21379	03/11/22 19:43	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21134	03/08/22 11:46	SC	XEN MID
Soluble	Analysis	300.0		1			21439	03/13/22 07:04	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: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

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: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

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: Sand Dunes 11 CS (Second pill)

Job ID: 880-12079-1
SDG: 22-0105-06

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-12079-1	S-1, 0.5	Solid	03/04/22 11:00	03/07/22 09:28
880-12079-2	S-1, 1	Solid	03/04/22 11:02	03/07/22 09:28
880-12079-3	S-1, 2	Solid	03/04/22 11:04	03/07/22 09:28
880-12079-4	S-1, 3	Solid	03/04/22 11:06	03/07/22 09:28
880-12079-5	S-1, 4	Solid	03/04/22 11:08	03/07/22 09:28
880-12079-6	S-1, 4.5	Solid	03/04/22 11:10	03/07/22 09:28
880-12079-7	S-2, 0.5	Solid	03/04/22 11:20	03/07/22 09:28
880-12079-8	S-2, 1	Solid	03/04/22 11:22	03/07/22 09:28
880-12079-9	S-2, 2	Solid	03/04/22 11:24	03/07/22 09:28
880-12079-10	S-2, 3	Solid	03/04/22 11:26	03/07/22 09:28
880-12079-11	S-2, 4	Solid	03/04/22 11:28	03/07/22 09:28
880-12079-12	S-2, 5	Solid	03/04/22 11:30	03/07/22 09:28
880-12079-13	S-3, 0.5	Solid	03/04/22 11:40	03/07/22 09:28
880-12079-14	S-3, 1	Solid	03/04/22 11:42	03/07/22 09:28
880-12079-15	S-3, 2	Solid	03/04/22 11:44	03/07/22 09:28
880-12079-16	S-3, 3	Solid	03/04/22 11:46	03/07/22 09:28
880-12079-17	S-3, 4	Solid	03/04/22 11:48	03/07/22 09:28
880-12079-18	S-3, 4.5	Solid	03/04/22 11:50	03/07/22 09:28

[illegible]

3/14/2022

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-12079-1

SDG Number: 22-0105-06

Login Number: 12079**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	

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: Sand Dunes 2nd Spill

Project Number: 22-0105-06

Location: New Mexico

Lab Order Number: 2C24005



Current Certification

Report Date: 03/30/22

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-4 @ 0.5'	2C24005-01	Soil	03/24/22 10:50	03-24-2022 15:46
S-4 @ 1'	2C24005-02	Soil	03/24/22 10:51	03-24-2022 15:46
S-4 @ 1.5'	2C24005-03	Soil	03/24/22 10:52	03-24-2022 15:46
S-5 @ 0.5'	2C24005-04	Soil	03/24/22 10:54	03-24-2022 15:46
S-5 @ 1'	2C24005-05	Soil	03/24/22 10:55	03-24-2022 15:46
S-5 @ 1.5'	2C24005-06	Soil	03/24/22 10:56	03-24-2022 15:46
S-6 @ 0.5'	2C24005-07	Soil	03/24/22 10:58	03-24-2022 15:46
S-6 @ 1'	2C24005-08	Soil	03/24/22 10:59	03-24-2022 15:46
S-6 @ 1.5'	2C24005-09	Soil	03/24/22 11:00	03-24-2022 15:46

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

S-4 @ 0.5'
2C24005-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00112	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:11	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:11	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:11	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:11	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:11	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	107 %		80-120		P2C2807	03/28/22 14:23	03/29/22 00:11	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	107 %		80-120		P2C2807	03/28/22 14:23	03/29/22 00:11	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	38.4	1.12	mg/kg dry	1	P2C2801	03/28/22 10:03	03/28/22 13:15	EPA 300.0	
% Moisture	11.0	0.1	%	1	P2C2804	03/28/22 10:49	03/28/22 10:53	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	28.1	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 17:02	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 17:02	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 17:02	TPH 8015M	
Surrogate: 1-Chlorooctane	76.2 %		70-130		P2C2512	03/25/22 15:00	03/28/22 17:02	TPH 8015M	
Surrogate: o-Terphenyl	86.5 %		70-130		P2C2512	03/25/22 15:00	03/28/22 17:02	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	03/25/22 15:00	03/28/22 17:02	calc	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

S-4 @ 1'
2C24005-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00105	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:32	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:32	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:32	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:32	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:32	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	103 %		80-120		P2C2807	03/28/22 14:23	03/29/22 00:32	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	100 %		80-120		P2C2807	03/28/22 14:23	03/29/22 00:32	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	19.2	1.05	mg/kg dry	1	P2C2801	03/28/22 10:03	03/28/22 13:34	EPA 300.0	
% Moisture	5.0	0.1	%	1	P2C2804	03/28/22 10:49	03/28/22 10:53	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.3	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 17:25	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 17:25	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 17:25	TPH 8015M	
Surrogate: 1-Chlorooctane	91.9 %		70-130		P2C2512	03/25/22 15:00	03/28/22 17:25	TPH 8015M	
Surrogate: o-Terphenyl	100 %		70-130		P2C2512	03/25/22 15:00	03/28/22 17:25	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	03/25/22 15:00	03/28/22 17:25	calc	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

S-4 @ 1.5'
2C24005-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00103	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:53	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:53	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:53	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:53	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 00:53	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	100 %		80-120		P2C2807	03/28/22 14:23	03/29/22 00:53	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	102 %		80-120		P2C2807	03/28/22 14:23	03/29/22 00:53	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	13.5	1.03	mg/kg dry	1	P2C2801	03/28/22 10:03	03/28/22 13:53	EPA 300.0	
% Moisture	3.0	0.1	%	1	P2C2804	03/28/22 10:49	03/28/22 10:53	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.8	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 17:48	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 17:48	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 17:48	TPH 8015M	
Surrogate: 1-Chlorooctane	81.0 %		70-130		P2C2512	03/25/22 15:00	03/28/22 17:48	TPH 8015M	
Surrogate: o-Terphenyl	91.1 %		70-130		P2C2512	03/25/22 15:00	03/28/22 17:48	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	03/25/22 15:00	03/28/22 17:48	calc	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

S-5 @ 0.5'
2C24005-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00115	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:15	EPA 8021B	
Toluene	ND	0.00115	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:15	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:15	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:15	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:15	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	102 %		80-120		P2C2807	03/28/22 14:23	03/29/22 01:15	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	102 %		80-120		P2C2807	03/28/22 14:23	03/29/22 01:15	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	66.6	1.15	mg/kg dry	1	P2C2801	03/28/22 10:03	03/28/22 14:12	EPA 300.0	
% Moisture	13.0	0.1	%	1	P2C2804	03/28/22 10:49	03/28/22 10:53	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	28.7	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 18:11	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 18:11	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 18:11	TPH 8015M	
Surrogate: 1-Chlorooctane	79.2 %		70-130		P2C2512	03/25/22 15:00	03/28/22 18:11	TPH 8015M	
Surrogate: o-Terphenyl	90.4 %		70-130		P2C2512	03/25/22 15:00	03/28/22 18:11	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	03/25/22 15:00	03/28/22 18:11	calc	

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

S-5 @ 1'
2C24005-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00105	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:36	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:36	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:36	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:36	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:36	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	103 %		80-120		P2C2807	03/28/22 14:23	03/29/22 01:36	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	98.3 %		80-120		P2C2807	03/28/22 14:23	03/29/22 01:36	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	47.3	1.05	mg/kg dry	1	P2C2801	03/28/22 10:03	03/28/22 14:31	EPA 300.0	
% Moisture	5.0	0.1	%	1	P2C2804	03/28/22 10:49	03/28/22 10:53	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.3	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 18:34	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 18:34	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 18:34	TPH 8015M	
Surrogate: 1-Chlorooctane	81.1 %		70-130		P2C2512	03/25/22 15:00	03/28/22 18:34	TPH 8015M	
Surrogate: o-Terphenyl	90.4 %		70-130		P2C2512	03/25/22 15:00	03/28/22 18:34	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	03/25/22 15:00	03/28/22 18:34	calc	

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

S-5 @ 1.5'
2C24005-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00103	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:57	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:57	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:57	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:57	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 01:57	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	103 %		80-120		P2C2807	03/28/22 14:23	03/29/22 01:57	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	99.9 %		80-120		P2C2807	03/28/22 14:23	03/29/22 01:57	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	33.2	1.03	mg/kg dry	1	P2C2801	03/28/22 10:03	03/28/22 14:50	EPA 300.0	
% Moisture	3.0	0.1	%	1	P2C2804	03/28/22 10:49	03/28/22 10:53	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.8	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 18:57	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 18:57	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 18:57	TPH 8015M	
Surrogate: 1-Chlorooctane	76.5 %		70-130		P2C2512	03/25/22 15:00	03/28/22 18:57	TPH 8015M	
Surrogate: o-Terphenyl	82.4 %		70-130		P2C2512	03/25/22 15:00	03/28/22 18:57	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	03/25/22 15:00	03/28/22 18:57	calc	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

S-6 @ 0.5'
2C24005-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00114	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 02:18	EPA 8021B	
Toluene	ND	0.00114	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 02:18	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 02:18	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 02:18	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P2C2807	03/28/22 14:23	03/29/22 02:18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	102 %		80-120		P2C2807	03/28/22 14:23	03/29/22 02:18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	103 %		80-120		P2C2807	03/28/22 14:23	03/29/22 02:18	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	9.68	1.14	mg/kg dry	1	P2C2801	03/28/22 10:03	03/28/22 15:09	EPA 300.0	
% Moisture	12.0	0.1	%	1	P2C2804	03/28/22 10:49	03/28/22 10:53	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	28.4	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 19:19	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 19:19	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 19:19	TPH 8015M	
Surrogate: 1-Chlorooctane	84.1 %		70-130		P2C2512	03/25/22 15:00	03/28/22 19:19	TPH 8015M	
Surrogate: o-Terphenyl	91.4 %		70-130		P2C2512	03/25/22 15:00	03/28/22 19:19	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	03/25/22 15:00	03/28/22 19:19	calc	

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

S-6 @ 1'
2C24005-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00105	mg/kg dry	1	P2C2912	03/29/22 15:58	03/29/22 19:31	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P2C2912	03/29/22 15:58	03/29/22 19:31	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P2C2912	03/29/22 15:58	03/29/22 19:31	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P2C2912	03/29/22 15:58	03/29/22 19:31	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P2C2912	03/29/22 15:58	03/29/22 19:31	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	103 %		80-120		P2C2912	03/29/22 15:58	03/29/22 19:31	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	108 %		80-120		P2C2912	03/29/22 15:58	03/29/22 19:31	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	6.04	1.05	mg/kg dry	1	P2C2801	03/28/22 10:03	03/28/22 16:06	EPA 300.0	
% Moisture	5.0	0.1	%	1	P2C2804	03/28/22 10:49	03/28/22 10:53	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.3	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 19:42	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 19:42	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 19:42	TPH 8015M	
Surrogate: 1-Chlorooctane	82.9 %		70-130		P2C2512	03/25/22 15:00	03/28/22 19:42	TPH 8015M	
Surrogate: o-Terphenyl	91.8 %		70-130		P2C2512	03/25/22 15:00	03/28/22 19:42	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	03/25/22 15:00	03/28/22 19:42	calc	

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

S-6 @ 1.5'
2C24005-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00103	mg/kg dry	1	P2C2912	03/29/22 15:58	03/29/22 19:52	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P2C2912	03/29/22 15:58	03/29/22 19:52	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P2C2912	03/29/22 15:58	03/29/22 19:52	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P2C2912	03/29/22 15:58	03/29/22 19:52	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P2C2912	03/29/22 15:58	03/29/22 19:52	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	104 %		80-120		P2C2912	03/29/22 15:58	03/29/22 19:52	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	102 %		80-120		P2C2912	03/29/22 15:58	03/29/22 19:52	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	7.67	1.03	mg/kg dry	1	P2C2801	03/28/22 10:03	03/28/22 17:03	EPA 300.0	
% Moisture	3.0	0.1	%	1	P2C2804	03/28/22 10:49	03/28/22 10:53	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.8	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 20:05	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 20:05	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P2C2512	03/25/22 15:00	03/28/22 20:05	TPH 8015M	
Surrogate: 1-Chlorooctane	85.2 %		70-130		P2C2512	03/25/22 15:00	03/28/22 20:05	TPH 8015M	
Surrogate: o-Terphenyl	92.7 %		70-130		P2C2512	03/25/22 15:00	03/28/22 20:05	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	03/25/22 15:00	03/28/22 20:05	calc	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

BTEX by 8021B - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P2C2807 - General Preparation (GC)

Blank (P2C2807-BLK1)

Prepared & Analyzed: 03/28/22

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	0.121		"	0.120		101	80-120			
Surrogate: 4-Bromofluorobenzene	0.120		"	0.120		100	80-120			

LCS (P2C2807-BS1)

Prepared & Analyzed: 03/28/22

Benzene	0.0887	0.00100	mg/kg wet	0.100		88.7	80-120			
Toluene	0.0850	0.00100	"	0.100		85.0	80-120			
Ethylbenzene	0.101	0.00100	"	0.100		101	80-120			
Xylene (p/m)	0.190	0.00200	"	0.200		95.1	80-120			
Xylene (o)	0.0843	0.00100	"	0.100		84.3	80-120			
Surrogate: 4-Bromofluorobenzene	0.121		"	0.120		101	80-120			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		101	80-120			

LCS Dup (P2C2807-BSD1)

Prepared & Analyzed: 03/28/22

Benzene	0.102	0.00100	mg/kg wet	0.100		102	80-120	14.5	20	
Toluene	0.0997	0.00100	"	0.100		99.7	80-120	16.0	20	
Ethylbenzene	0.118	0.00100	"	0.100		118	80-120	15.3	20	
Xylene (p/m)	0.222	0.00200	"	0.200		111	80-120	15.3	20	
Xylene (o)	0.102	0.00100	"	0.100		102	80-120	18.5	20	
Surrogate: 1,4-Difluorobenzene	0.123		"	0.120		103	80-120			
Surrogate: 4-Bromofluorobenzene	0.125		"	0.120		105	80-120			

Calibration Check (P2C2807-CCV1)

Prepared & Analyzed: 03/28/22

Benzene	0.102	0.00100	mg/kg wet	0.100		102	80-120			
Toluene	0.103	0.00100	"	0.100		103	80-120			
Ethylbenzene	0.114	0.00100	"	0.100		114	80-120			
Xylene (p/m)	0.230	0.00200	"	0.200		115	80-120			
Xylene (o)	0.106	0.00100	"	0.100		106	80-120			
Surrogate: 4-Bromofluorobenzene	0.117		"	0.120		97.6	75-125			
Surrogate: 1,4-Difluorobenzene	0.120		"	0.120		99.7	75-125			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

BTEX by 8021B - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P2C2807 - General Preparation (GC)

Calibration Check (P2C2807-CCV2)				Prepared & Analyzed: 03/28/22						
Benzene	0.111	0.00100	mg/kg wet	0.100		111	80-120			
Toluene	0.112	0.00100	"	0.100		112	80-120			
Ethylbenzene	0.120	0.00100	"	0.100		120	80-120			
Xylene (p/m)	0.237	0.00200	"	0.200		119	80-120			
Xylene (o)	0.117	0.00100	"	0.100		117	80-120			
Surrogate: 4-Bromofluorobenzene	0.126		"	0.120		105	75-125			
Surrogate: 1,4-Difluorobenzene	0.126		"	0.120		105	75-125			

Calibration Check (P2C2807-CCV3)				Prepared: 03/28/22 Analyzed: 03/29/22						
Benzene	0.111	0.00100	mg/kg wet	0.100		111	80-120			
Toluene	0.111	0.00100	"	0.100		111	80-120			
Ethylbenzene	0.118	0.00100	"	0.100		118	80-120			
Xylene (p/m)	0.237	0.00200	"	0.200		118	80-120			
Xylene (o)	0.115	0.00100	"	0.100		115	80-120			
Surrogate: 1,4-Difluorobenzene	0.123		"	0.120		103	75-125			
Surrogate: 4-Bromofluorobenzene	0.124		"	0.120		103	75-125			

Matrix Spike (P2C2807-MS1)				Source: 2C24003-01		Prepared: 03/28/22 Analyzed: 03/29/22				
Benzene	0.0969	0.00114	mg/kg dry	0.114	ND	85.3	80-120			
Toluene	0.0938	0.00114	"	0.114	ND	82.5	80-120			
Ethylbenzene	0.100	0.00114	"	0.114	ND	88.0	80-120			
Xylene (p/m)	0.185	0.00227	"	0.227	ND	81.4	80-120			
Xylene (o)	0.0892	0.00114	"	0.114	ND	78.5	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	0.142		"	0.136		104	80-120			
Surrogate: 4-Bromofluorobenzene	0.143		"	0.136		105	80-120			

Matrix Spike Dup (P2C2807-MSD1)				Source: 2C24003-01		Prepared: 03/28/22 Analyzed: 03/29/22				
Benzene	0.0989	0.00114	mg/kg dry	0.114	ND	87.0	80-120	2.03	20	
Toluene	0.0983	0.00114	"	0.114	ND	86.5	80-120	4.73	20	
Ethylbenzene	0.106	0.00114	"	0.114	ND	93.5	80-120	6.07	20	
Xylene (p/m)	0.198	0.00227	"	0.227	ND	87.3	80-120	7.06	20	
Xylene (o)	0.0957	0.00114	"	0.114	ND	84.2	80-120	7.10	20	
Surrogate: 4-Bromofluorobenzene	0.146		"	0.136		107	80-120			
Surrogate: 1,4-Difluorobenzene	0.143		"	0.136		105	80-120			

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

BTEX by 8021B - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P2C2912 - General Preparation (GC)

Blank (P2C2912-BLK1)

Prepared & Analyzed: 03/29/22

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	0.126		"	0.120		105	80-120			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		102	80-120			

LCS (P2C2912-BS1)

Prepared & Analyzed: 03/29/22

Benzene	0.104	0.00100	mg/kg wet	0.100		104	80-120			
Toluene	0.104	0.00100	"	0.100		104	80-120			
Ethylbenzene	0.116	0.00100	"	0.100		116	80-120			
Xylene (p/m)	0.231	0.00200	"	0.200		116	80-120			
Xylene (o)	0.107	0.00100	"	0.100		107	80-120			
Surrogate: 1,4-Difluorobenzene	0.123		"	0.120		103	80-120			
Surrogate: 4-Bromofluorobenzene	0.130		"	0.120		109	80-120			

LCS Dup (P2C2912-BS1)

Prepared & Analyzed: 03/29/22

Benzene	0.112	0.00100	mg/kg wet	0.100		112	80-120	7.88	20	
Toluene	0.112	0.00100	"	0.100		112	80-120	7.50	20	
Ethylbenzene	0.116	0.00100	"	0.100		116	80-120	0.362	20	
Xylene (p/m)	0.238	0.00200	"	0.200		119	80-120	2.75	20	
Xylene (o)	0.115	0.00100	"	0.100		115	80-120	7.27	20	
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		102	80-120			
Surrogate: 4-Bromofluorobenzene	0.129		"	0.120		107	80-120			

Calibration Check (P2C2912-CCV1)

Prepared & Analyzed: 03/29/22

Benzene	0.0966	0.00100	mg/kg wet	0.100		96.6	80-120			
Toluene	0.100	0.00100	"	0.100		100	80-120			
Ethylbenzene	0.111	0.00100	"	0.100		111	80-120			
Xylene (p/m)	0.224	0.00200	"	0.200		112	80-120			
Xylene (o)	0.105	0.00100	"	0.100		105	80-120			
Surrogate: 1,4-Difluorobenzene	0.123		"	0.120		102	75-125			
Surrogate: 4-Bromofluorobenzene	0.127		"	0.120		106	75-125			

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

BTEX by 8021B - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P2C2912 - General Preparation (GC)

Calibration Check (P2C2912-CCV2)

Prepared & Analyzed: 03/29/22

Benzene	0.110	0.00100	mg/kg wet	0.100		110	80-120			
Toluene	0.112	0.00100	"	0.100		112	80-120			
Ethylbenzene	0.120	0.00100	"	0.100		120	80-120			
Xylene (p/m)	0.237	0.00200	"	0.200		118	80-120			
Xylene (o)	0.119	0.00100	"	0.100		119	80-120			
Surrogate: 4-Bromofluorobenzene	0.127		"	0.120		106	75-125			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		102	75-125			

Calibration Check (P2C2912-CCV3)

Prepared: 03/29/22 Analyzed: 03/30/22

Benzene	0.114	0.00100	mg/kg wet	0.100		114	80-120			
Toluene	0.116	0.00100	"	0.100		116	80-120			
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120			
Xylene (p/m)	0.234	0.00200	"	0.200		117	80-120			
Xylene (o)	0.118	0.00100	"	0.100		118	80-120			
Surrogate: 4-Bromofluorobenzene	0.128		"	0.120		107	75-125			
Surrogate: 1,4-Difluorobenzene	0.123		"	0.120		102	75-125			

Matrix Spike (P2C2912-MS1)

Source: 2C29006-01

Prepared: 03/29/22 Analyzed: 03/30/22

Benzene	0.0683	0.00103	mg/kg dry	0.103	0.00106	65.2	80-120			QM-05
Toluene	0.0535	0.00103	"	0.103	0.00335	48.6	80-120			QM-05
Ethylbenzene	0.0462	0.00103	"	0.103	0.0120	33.2	80-120			QM-05
Xylene (p/m)	0.0961	0.00206	"	0.206	0.0366	28.8	80-120			QM-05
Xylene (o)	0.0348	0.00103	"	0.103	0.00726	26.8	80-120			QM-05
Surrogate: 4-Bromofluorobenzene	0.123		"	0.124		99.2	80-120			
Surrogate: 1,4-Difluorobenzene	0.133		"	0.124		107	80-120			

Matrix Spike Dup (P2C2912-MSD1)

Source: 2C29006-01

Prepared: 03/29/22 Analyzed: 03/30/22

Benzene	0.0641	0.00103	mg/kg dry	0.103	0.00106	61.2	80-120	6.39	20	QM-05
Toluene	0.0482	0.00103	"	0.103	0.00335	43.5	80-120	11.0	20	QM-05
Ethylbenzene	0.0414	0.00103	"	0.103	0.0120	28.6	80-120	14.8	20	QM-05
Xylene (p/m)	0.0862	0.00206	"	0.206	0.0366	24.0	80-120	18.2	20	QM-05
Xylene (o)	0.0313	0.00103	"	0.103	0.00726	23.3	80-120	13.8	20	QM-05
Surrogate: 1,4-Difluorobenzene	0.136		"	0.124		110	80-120			
Surrogate: 4-Bromofluorobenzene	0.120		"	0.124		97.1	80-120			

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P2C2801 - * DEFAULT PREP *****

Blank (P2C2801-BLK1)

Prepared & Analyzed: 03/28/22

Chloride	ND	1.00	mg/kg wet
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LCS (P2C2801-BS1)

Prepared & Analyzed: 03/28/22

Chloride	42.0		mg/kg	40.0	105	90-110
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LCS Dup (P2C2801-BSD1)

Prepared & Analyzed: 03/28/22

Chloride	41.9		mg/kg	40.0	105	90-110	0.131	10
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Calibration Blank (P2C2801-CCB1)

Prepared & Analyzed: 03/28/22

Chloride	0.130		mg/kg wet
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Calibration Blank (P2C2801-CCB2)

Prepared & Analyzed: 03/28/22

Chloride	0.0850		mg/kg wet
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Calibration Check (P2C2801-CCV1)

Prepared & Analyzed: 03/28/22

Chloride	20.7		mg/kg	20.0	104	90-110
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Calibration Check (P2C2801-CCV2)

Prepared & Analyzed: 03/28/22

Chloride	20.9		mg/kg	20.0	105	90-110
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Calibration Check (P2C2801-CCV3)

Prepared & Analyzed: 03/28/22

Chloride	21.0		mg/kg	20.0	105	90-110
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Matrix Spike (P2C2801-MS1)

Source: 2C25019-01

Prepared & Analyzed: 03/28/22

Chloride	10700	27.2	mg/kg dry	1360	9160	112	80-120
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Matrix Spike (P2C2801-MS2)

Source: 2C24005-08

Prepared & Analyzed: 03/28/22

Chloride	267	1.05	mg/kg dry	263	6.04	99.0	80-120
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Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P2C2801 - * DEFAULT PREP *****

Matrix Spike Dup (P2C2801-MSD1)	Source: 2C25019-01			Prepared & Analyzed: 03/28/22						
Chloride	10700	27.2	mg/kg dry	1360	9160	113	80-120	0.0762	20	
Matrix Spike Dup (P2C2801-MSD2)	Source: 2C24005-08			Prepared & Analyzed: 03/28/22						
Chloride	267	1.05	mg/kg dry	263	6.04	99.2	80-120	0.170	20	

Batch P2C2804 - * DEFAULT PREP *****

Blank (P2C2804-BLK1)				Prepared & Analyzed: 03/28/22						
% Moisture	ND	0.1	%							
Blank (P2C2804-BLK2)				Prepared & Analyzed: 03/28/22						
% Moisture	ND	0.1	%							
Blank (P2C2804-BLK3)				Prepared & Analyzed: 03/28/22						
% Moisture	ND	0.1	%							
Duplicate (P2C2804-DUP1)	Source: 2C22009-10			Prepared & Analyzed: 03/28/22						
% Moisture	6.0	0.1	%		6.0			0.00	20	
Duplicate (P2C2804-DUP2)	Source: 2C24003-03			Prepared & Analyzed: 03/28/22						
% Moisture	11.0	0.1	%		11.0			0.00	20	
Duplicate (P2C2804-DUP3)	Source: 2C24004-12			Prepared & Analyzed: 03/28/22						
% Moisture	48.0	0.1	%		48.0			0.00	20	
Duplicate (P2C2804-DUP4)	Source: 2C24006-01			Prepared & Analyzed: 03/28/22						
% Moisture	9.0	0.1	%		9.0			0.00	20	

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.	Project: Sand Dunes 2nd Spill
P.O. Box 50685	Project Number: 22-0105-06
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P2C2804 - *** DEFAULT PREP ***

Duplicate (P2C2804-DUP5)	Source: 2C24007-04			Prepared & Analyzed: 03/28/22						
% Moisture	18.0	0.1	%		19.0			5.41	20	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P2C2512 - * DEFAULT PREP *****

Blank (P2C2512-BLK1)

Prepared: 03/25/22 Analyzed: 03/28/22

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	103		"	100		103	70-130			
Surrogate: o-Terphenyl	55.5		"	50.0		111	70-130			

LCS (P2C2512-BS1)

Prepared: 03/25/22 Analyzed: 03/28/22

C6-C12	991	25.0	mg/kg wet	1000		99.1	75-125			
>C12-C28	973	25.0	"	1000		97.3	75-125			
Surrogate: 1-Chlorooctane	109		"	100		109	70-130			
Surrogate: o-Terphenyl	61.7		"	50.0		123	70-130			

LCS Dup (P2C2512-BSD1)

Prepared: 03/25/22 Analyzed: 03/28/22

C6-C12	1060	25.0	mg/kg wet	1000		106	75-125	6.56	20	
>C12-C28	1050	25.0	"	1000		105	75-125	7.42	20	
Surrogate: 1-Chlorooctane	115		"	100		115	70-130			
Surrogate: o-Terphenyl	61.3		"	50.0		123	70-130			

Calibration Check (P2C2512-CCV1)

Prepared: 03/25/22 Analyzed: 03/28/22

C6-C12	504	25.0	mg/kg wet	500		101	85-115			
>C12-C28	474	25.0	"	500		94.7	85-115			
Surrogate: 1-Chlorooctane	120		"	100		120	70-130			
Surrogate: o-Terphenyl	56.8		"	50.0		114	70-130			

Calibration Check (P2C2512-CCV2)

Prepared: 03/25/22 Analyzed: 03/28/22

C6-C12	462	25.0	mg/kg wet	500		92.4	85-115			
>C12-C28	435	25.0	"	500		87.1	85-115			
Surrogate: 1-Chlorooctane	112		"	100		112	70-130			
Surrogate: o-Terphenyl	52.7		"	50.0		105	70-130			

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P2C2512 - * DEFAULT PREP *****

Calibration Check (P2C2512-CCV3)

Prepared: 03/25/22 Analyzed: 03/28/22

C6-C12	502	25.0	mg/kg wet	500		100	85-115			
>C12-C28	487	25.0	"	500		97.5	85-115			
Surrogate: 1-Chlorooctane	121		"	100		121	70-130			
Surrogate: o-Terphenyl	57.2		"	50.0		114	70-130			

Duplicate (P2C2512-DUP1)

Source: 2C24004-12

Prepared: 03/25/22 Analyzed: 03/29/22

C6-C12	1760	48.1	mg/kg dry		17200			163	20	R3
>C12-C28	6110	48.1	"		58300			162	20	R3
Surrogate: 1-Chlorooctane	175		"	192		90.8	70-130			
Surrogate: o-Terphenyl	96.7		"	96.2		101	70-130			

Permian Basin Environmental Lab, L.P.

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Released to Imaging: 7/25/2022 11:02:11 AM

Page 20 of 24

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Sand Dunes 2nd Spill
Project Number: 22-0105-06
Project Manager: Mark Larson

Notes and Definitions

ROI Received on Ice

R3 The RPD exceeded the acceptance limit due to sample matrix effects.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

NPBEL C Chain of Custody was not generated at PBELAB

BULK Samples received in Bulk soil containers may be biased low in the nC6-C12 TPH Range

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

3/30/2022

Brent Barron, Laboratory Director/Technical Director

Larson & Associates, Inc.

Project: Sand Dunes 2nd Spill

P.O. Box 50685

Project Number: 22-0105-06

Midland TX, 79710

Project Manager: Mark Larson

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Varson & Associates, Inc.
Environmental Consultants

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

Data Reported to:

DATE: 3/29/2022 PAGE 1 OF 1
PO#: 2024005 LAB WORK ORDER#:
PROJECT LOCATION OR NAME: Sand Blanes 2nd St
LAI PROJECT #: 21-0105-06 COLLECTOR: 22

CHAIN-OF-CUSTODY

No 1889

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION				ANALYSES	FIELD NOTES	
						HCl	HNO ₃	H ₂ SO ₄ ☐ NaOH ☐	ICE			UNPRESERVED
S-4,0.5	1	3/29/22	1050	S	1				X			
S-4,1	2		1051						X			
S-4,1.5	3		1052						X			
S-5,0.5	4		1054						X			
S-5,1	5		1055						X			
S-5,1.5	6		1056						X			
S-6,0.5	7		1058						X			
S-6,1	8		1059						X			
S-6,1.5	9		1100						X			
TOTAL												
RELINQUISHED BY: (Signature) <u>3/29/22 15:16</u> RECEIVED BY: (Signature) <u>Chime Dime</u>												
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)												
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)												
LABORATORY: <u>P&E</u>												



DOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISION Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

Sample Receipt Checklist

Yes	Notes
☒	
Chain of custody signed/dated/time when relinquished and received?	
Samples received in presence of second sampler?	
Samplers name present on COC?	
Sample containers intact?	
Has any seals been broken on sample bottles?	
Samples in proper container/bottle?	
All samples received within holding time?	
Analysis requested for all samples submitted?	
Seals of container/coolers intact when delivered?	
Custody seals intact on shipping container/coolers?	

Login Notes: 002 2024005

PBEL_SAMPLE_CHECKLIST_2021_1



DOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISION Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

SAMPLE VARIANCE/NON-CONFORMANCE

Variance/Discrepancy:

Resolution:

Client Contacted
Name: _____
Date/Time: _____
NC Initiated by: _____ Approved by: _____

PBEL_SAMPLE_CHECKLIST_2021_1



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-15604-1

Laboratory Sample Delivery Group: 22-0105-06

Client Project/Site: Sand Dunes 11 CS SND Second Spill

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:

6/13/2022 3:35:10 PM

Holly Taylor, Project Manager
(806)794-1296

Holly.Taylor@et.eurofinsus.com

LINKS

Review your project
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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: Sand Dunes 11 CS SND Second Spill

Laboratory Job ID: 880-15604-1
SDG: 22-0105-06

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
SQL	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: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

Job ID: 880-15604-1

Laboratory: Eurofins Midland**Narrative**

Job Narrative
880-15604-1

Receipt

The samples were received on 6/8/2022 8:36 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.2°C

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

Client Sample ID: C-1 1.0'

Lab Sample ID: 880-15604-1

Date Collected: 06/07/22 11:15

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 15:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 15:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 15:58	1
m,p-Xylenes	<0.00401	U	0.00401	mg/Kg		06/08/22 09:16	06/08/22 15:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 15:58	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		06/08/22 09:16	06/08/22 15:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	06/08/22 09:16	06/08/22 15:58	1
1,4-Difluorobenzene (Surr)	99		70 - 130	06/08/22 09:16	06/08/22 15:58	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			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/10/22 09:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/08/22 17:15	06/09/22 19:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/08/22 17:15	06/09/22 19:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/08/22 17:15	06/09/22 19:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	112		70 - 130	06/08/22 17:15	06/09/22 19:13	1
o-Terphenyl (Surr)	110		70 - 130	06/08/22 17:15	06/09/22 19:13	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38.8		4.95	mg/Kg			06/11/22 00:11	1

Client Sample ID: SW-1 0-1.0'

Lab Sample ID: 880-15604-2

Date Collected: 06/07/22 11:16

Matrix: Solid

Date Received: 06/08/22 08:36

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 16:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 16:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 16:18	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		06/08/22 09:16	06/08/22 16:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 16:18	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		06/08/22 09:16	06/08/22 16:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	06/08/22 09:16	06/08/22 16:18	1
1,4-Difluorobenzene (Surr)	95		70 - 130	06/08/22 09:16	06/08/22 16:18	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

Client Sample ID: SW-1 0-1.0'

Lab Sample ID: 880-15604-2

Date Collected: 06/07/22 11:16

Matrix: Solid

Date Received: 06/08/22 08:36

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			06/09/22 13:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/10/22 09:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		06/08/22 17:15	06/09/22 19:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/08/22 17:15	06/09/22 19:35	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/08/22 17:15	06/09/22 19:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	111		70 - 130			06/08/22 17:15	06/09/22 19:35	1
o-Terphenyl (Surr)	120		70 - 130			06/08/22 17:15	06/09/22 19:35	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53.1		4.97	mg/Kg			06/11/22 00:20	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

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)
880-15604-1	C-1 1.0'	115	99
880-15604-2	SW-1 0-1.0'	102	95
LCS 880-27071/1-A	Lab Control Sample	101	103
LCSD 880-27071/2-A	Lab Control Sample Dup	101	104
MB 880-27071/5-A	Method Blank	103	92
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)
880-15604-1	C-1 1.0'	112	110
880-15604-2	SW-1 0-1.0'	111	120
LCS 880-27115/2-A	Lab Control Sample	118	109
LCSD 880-27115/3-A	Lab Control Sample Dup	106	99
MB 880-27115/1-A	Method Blank	95	98
Surrogate Legend			
1CO = 1-Chlorooctane (Surr)			
OTPH = o-Terphenyl (Surr)			

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-27071/5-A

Matrix: Solid

Analysis Batch: 27069

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27071

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 11:42	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 11:42	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 11:42	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		06/08/22 09:16	06/08/22 11:42	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/08/22 09:16	06/08/22 11:42	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/08/22 09:16	06/08/22 11:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	06/08/22 09:16	06/08/22 11:42	1
1,4-Difluorobenzene (Surr)	92		70 - 130	06/08/22 09:16	06/08/22 11:42	1

Lab Sample ID: LCS 880-27071/1-A

Matrix: Solid

Analysis Batch: 27069

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27071

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1028		mg/Kg		103	70 - 130
Toluene	0.100	0.09681		mg/Kg		97	70 - 130
Ethylbenzene	0.100	0.1002		mg/Kg		100	70 - 130
m,p-Xylenes	0.200	0.2015		mg/Kg		101	70 - 130
o-Xylene	0.100	0.1002		mg/Kg		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: LCSD 880-27071/2-A

Matrix: Solid

Analysis Batch: 27069

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27071

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1108		mg/Kg		111	70 - 130	7	35
Toluene	0.100	0.1054		mg/Kg		105	70 - 130	8	35
Ethylbenzene	0.100	0.1077		mg/Kg		108	70 - 130	7	35
m,p-Xylenes	0.200	0.2172		mg/Kg		109	70 - 130	7	35
o-Xylene	0.100	0.1084		mg/Kg		108	70 - 130	8	35

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

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

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

Lab Sample ID: MB 880-27115/1-A

Matrix: Solid

Analysis Batch: 27121

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27115

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/08/22 17:15	06/09/22 10:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/08/22 17:15	06/09/22 10:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/08/22 17:15	06/09/22 10:28	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	95		70 - 130			06/08/22 17:15	06/09/22 10:28	1
o-Terphenyl (Surr)	98		70 - 130			06/08/22 17:15	06/09/22 10:28	1

Lab Sample ID: LCS 880-27115/2-A

Matrix: Solid

Analysis Batch: 27121

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27115

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1105		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1128		mg/Kg		113	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
1-Chlorooctane (Surr)	118		70 - 130				
o-Terphenyl (Surr)	109		70 - 130				

Lab Sample ID: LCSD 880-27115/3-A

Matrix: Solid

Analysis Batch: 27121

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27115

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	928.0		mg/Kg		93	70 - 130	17	20
Diesel Range Organics (Over C10-C28)	1000	1017		mg/Kg		102	70 - 130	10	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
1-Chlorooctane (Surr)	106		70 - 130						
o-Terphenyl (Surr)	99		70 - 130						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-27175/1-A

Matrix: Solid

Analysis Batch: 27311

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			06/10/22 19:43	1

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-27175/2-A

Matrix: Solid

Analysis Batch: 27311

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	256.1		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-27175/3-A

Matrix: Solid

Analysis Batch: 27311

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	260.4		mg/Kg		104	90 - 110	2	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

GC VOA

Analysis Batch: 27069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15604-1	C-1 1.0'	Total/NA	Solid	8021B	27071
880-15604-2	SW-1 0-1.0'	Total/NA	Solid	8021B	27071
MB 880-27071/5-A	Method Blank	Total/NA	Solid	8021B	27071
LCS 880-27071/1-A	Lab Control Sample	Total/NA	Solid	8021B	27071
LCSD 880-27071/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	27071

Prep Batch: 27071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15604-1	C-1 1.0'	Total/NA	Solid	5035	
880-15604-2	SW-1 0-1.0'	Total/NA	Solid	5035	
MB 880-27071/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-27071/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-27071/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 27193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15604-1	C-1 1.0'	Total/NA	Solid	Total BTEX	
880-15604-2	SW-1 0-1.0'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 27115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15604-1	C-1 1.0'	Total/NA	Solid	8015NM Prep	
880-15604-2	SW-1 0-1.0'	Total/NA	Solid	8015NM Prep	
MB 880-27115/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-27115/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-27115/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 27121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15604-1	C-1 1.0'	Total/NA	Solid	8015B NM	27115
880-15604-2	SW-1 0-1.0'	Total/NA	Solid	8015B NM	27115
MB 880-27115/1-A	Method Blank	Total/NA	Solid	8015B NM	27115
LCS 880-27115/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	27115
LCSD 880-27115/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	27115

Analysis Batch: 27278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15604-1	C-1 1.0'	Total/NA	Solid	8015 NM	
880-15604-2	SW-1 0-1.0'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 27175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15604-1	C-1 1.0'	Soluble	Solid	DI Leach	
880-15604-2	SW-1 0-1.0'	Soluble	Solid	DI Leach	
MB 880-27175/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-27175/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-27175/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

HPLC/IC

Analysis Batch: 27311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15604-1	C-1 1.0'	Soluble	Solid	300.0	27175
880-15604-2	SW-1 0-1.0'	Soluble	Solid	300.0	27175
MB 880-27175/1-A	Method Blank	Soluble	Solid	300.0	27175
LCS 880-27175/2-A	Lab Control Sample	Soluble	Solid	300.0	27175
LCSD 880-27175/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	27175

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

Client Sample ID: C-1 1.0'

Lab Sample ID: 880-15604-1

Date Collected: 06/07/22 11:15

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1	0 mL	1.0 mL	27069	06/08/22 15:58	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27193	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27278	06/10/22 09:57	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	27115	06/08/22 17:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27121	06/09/22 19:13	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	27175	06/09/22 11:59	CH	XEN MID
Soluble	Analysis	300.0		1			27311	06/11/22 00:11	CH	XEN MID

Client Sample ID: SW-1 0-1.0'

Lab Sample ID: 880-15604-2

Date Collected: 06/07/22 11:16

Matrix: Solid

Date Received: 06/08/22 08:36

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	27071	06/08/22 09:16	MR	XEN MID
Total/NA	Analysis	8021B		1			27069	06/08/22 16:18	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27193	06/09/22 13:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			27278	06/10/22 09:57	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	27115	06/08/22 17:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27121	06/09/22 19:35	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	27175	06/09/22 11:59	CH	XEN MID
Soluble	Analysis	300.0		1			27311	06/11/22 00:20	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: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

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.

Job ID: 880-15604-1

Project/Site: Sand Dunes 11 CS SND Second Spill

SDG: 22-0105-06

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: Sand Dunes 11 CS SND Second Spill

Job ID: 880-15604-1
SDG: 22-0105-06

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-15604-1	C-1 1.0'	Solid	06/07/22 11:15	06/08/22 08:36
880-15604-2	SW-1 0-1.0'	Solid	06/07/22 11:16	06/08/22 08:36

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14

6/13/2022

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-15604-1

SDG Number: 22-0105-06

Login Number: 15604

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 E
Photographs

Tracking Number: nAPP2106659781 & nAPP2205652777

Closure Report

SND 1201 Federal 004 3002H, Chevron USA, Inc.

Condensate Releases

June 16, 2022



Spill Area (nAPP2106659781) viewing South



Spill Area (nAPP2106659781) viewing West

Tracking Number: nAPP2106659781 & nAPP2205652777

Closure Report

SND 1201 Federal 004 3002H, Chevron USA, Inc.

Condensate Releases

June 16, 2022



Torn liner (nAPP2205652777) viewing North

Tracking Number: nAPP2106659781 & nAPP2205652777

Closure Report

SND 1201 Federal 004 3002H, Chevron USA, Inc.

Condensate Releases

June 16, 2022



Torn Liner (nAPP2205652777) viewing North



Excavated soil (nAPP2106659781) viewing West

Tracking Number: nAPP2106659781 & nAPP2205652777

Closure Report

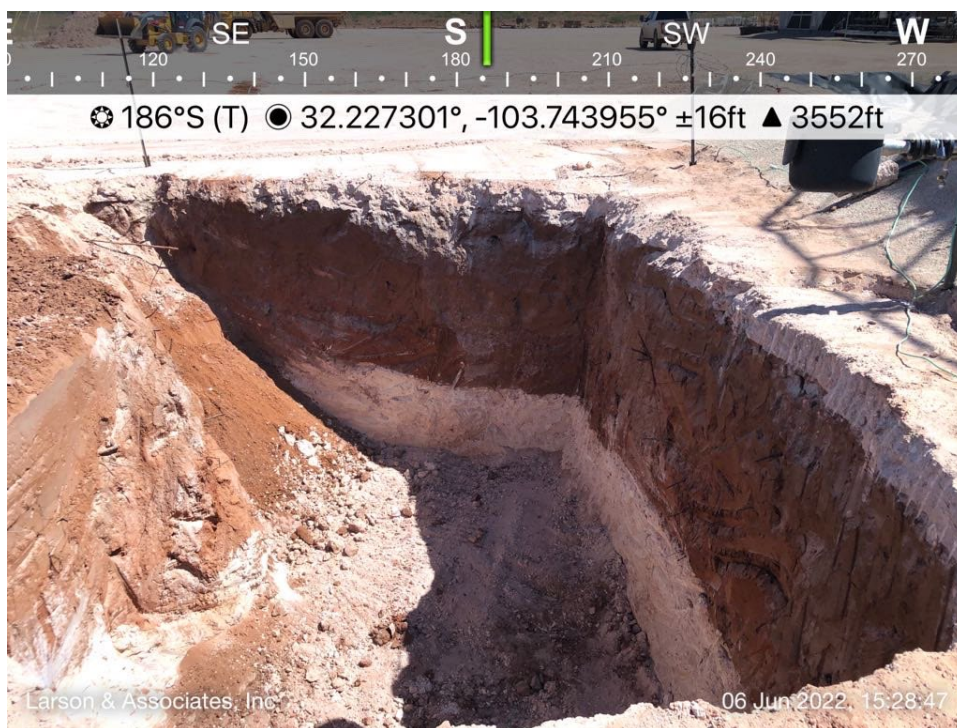
SND 1201 Federal 004 3002H, Chevron USA, Inc.

Condensate Releases

June 16, 2022



Excavated soil (nAPP2106659781) viewing Northeast



Excavated soil (nAPP2106659781) viewing South

Tracking Number: nAPP2106659781 & nAPP2205652777

Closure Report

SND 1201 Federal 004 3002H, Chevron USA, Inc.

Condensate Releases

June 16, 2022



Excavated soil (nAPP2205652777) viewing West



Excavated soil (nAPP2205652777) viewing Northeast

Tracking Number: nAPP2106659781 & nAPP2205652777

Closure Report

SND 1201 Federal 004 3002H, Chevron USA, Inc.

Condensate Releases

June 16, 2022



Backfilled excavation (nAPP2106659781) viewing northwest



Backfilled excavation (nAPP2106659781) viewing north

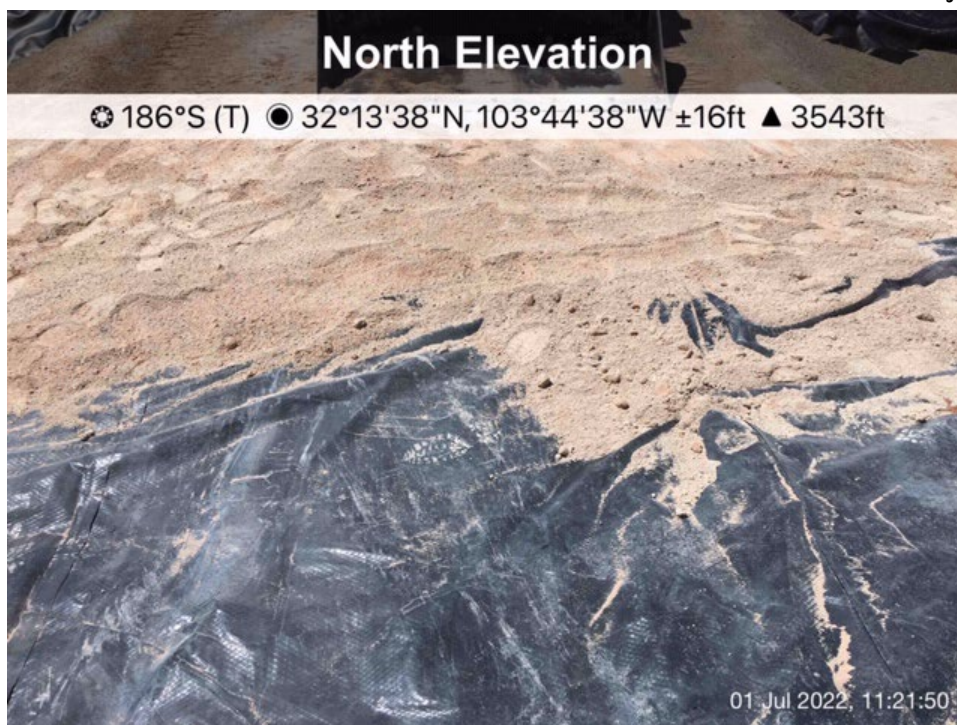
Tracking Number: nAPP2106659781 & nAPP2205652777

Closure Report

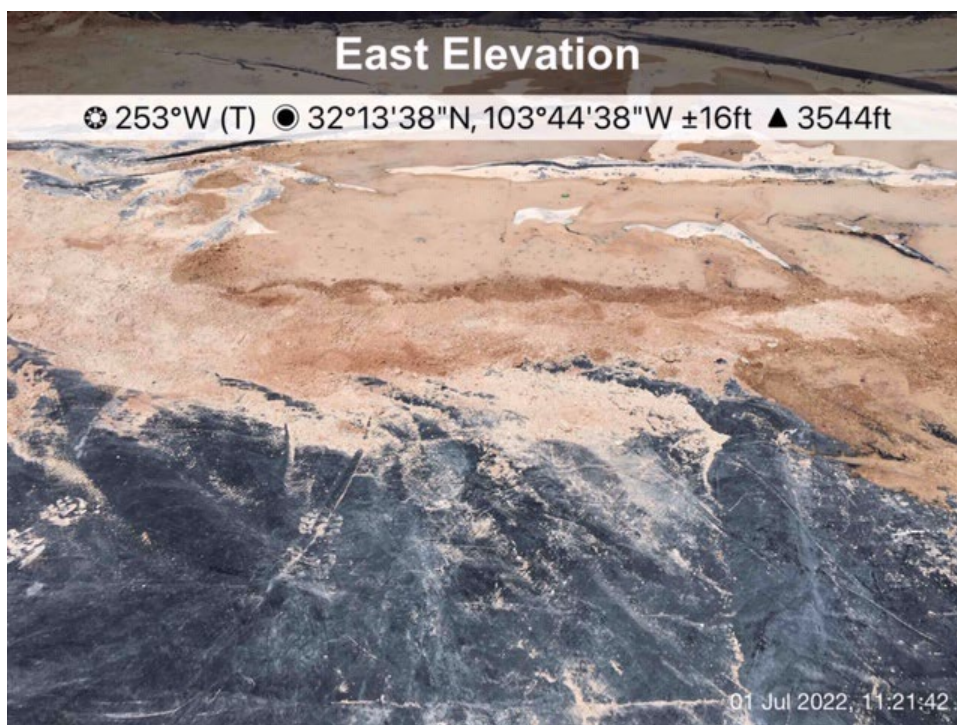
SND 1201 Federal 004 3002H, Chevron USA, Inc.

Condensate Releases

June 16, 2022



Backfilled and Repaired Liner (nAPP2205652777)



Backfilled and Repaired Liner (nAPP2205652777)

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 126329

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 126329
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Approved for this incident nAPP2106659781 and nAPP2205652777.	7/25/2022