State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nAPP2123134861/ |
| District RP | nAPP2201046595/ |
| Facility ID | nAPP2216545859 |
| 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? | 70.12 (ft bgs) |
| Did this release impact groundwater or surface water? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | ☐ Yes ☒ No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a wetland? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying a subsurface mine? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | ☐ Yes ☒ No |
| Are the lateral extents of the release within a 100-year floodplain? | ☐ Yes ☒ No |
| Did the release impact areas **not** on an exploration, development, production, or storage site? | ☐ Yes ☒ No |

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nAPP2123134861/ |
| District RP | nAPP2201046595/ |
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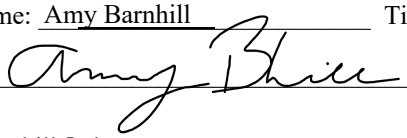
| Application ID | |

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

Printed Name: Amy Barnhill Title: Environmental Advisor

Signature:  Date: 8-23-23

email: ABarnhill@chevron.com Telephone:432-687-7723

**OCD Only**

Received by: Shelly Wells Date: 8/24/2023

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nAPP2123134861/ |
| District RP | nAPP2201046595/ |
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| Application ID | |

# Remediation Plan

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

- [x] Detailed description of proposed remediation technique
- [x] Scaled sitemap with GPS coordinates showing delineation points
- [x] Estimated volume of material to be remediated
- [x] Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- [x] 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.***

- [X] Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- [X] Extents of contamination must be fully delineated.
- [X] 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: Environmental Advisor

Signature: Amy Barnhill Date: 8-23-23

email: ABarnhill@chevron.com Telephone: 432-687-7723

**OCD Only**

Received by: Shelly Wells Date: 8/24/2023

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

Signature: Date:

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nAPP2123134861/ |
| District RP | nAPP2201046595/ |
| Facility ID | nAPP2216545859 |
| Application ID | |

# Closure

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

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

[X] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[X] 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)

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

[X] 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: Environmental Advisor

Signature: Amy Barnhill Date: 8-23-23

email: ABarnhill@chevron.com Telephone: 432-687-7723

**OCD Only**

Received by: Shelly Wells Date: 8/24/2023

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

Closure Approved by: Nelson Velez Date: 12/05/2023

Printed Name: Nelson Velez Title: Environmental Specialist - Adv

This remediation closure applies to nAPP2123134861 only.

# Tracking Number: nAPP2123134861 / nAPP2201046595 / nAPP2216545859
# Closure Report
# Salado Draw 19 CTB Waterline / Manifold / PW Release
# Crude Oil and/or Produced Water Releases
## Lea County, New Mexico

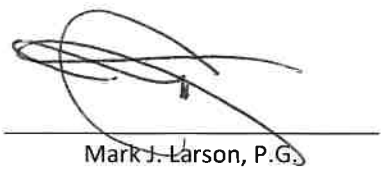
Latitude: N 32.034993°
Longitude: W -103.616822°

LAI Project No. 22-0105-01 / 22-0105-04 / 22-0105-09

August 10, 2023

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

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



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

Robert Nelson
Project Manager

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Appendix B Karst Risk Potential
Appendix C Soil Boring Log
Appendix D NMOCD Communications
Appendix E Laboratory Reports
Appendix F Photographs

# 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 I for a three (3) crude oil and/or produced water releases (Waterline, Manifold, and Produced Water Release) at the Salado Draw 19 CTB (Site) located in Unit D (Lot 1), Section 19, Township 26 South, Range 33 East in Lea County, New Mexico. The geodetic position is North 32.034993° and West -103.616822°. Figure 1 presents a topographic map. Figure 2 presents an aerial map for the three (3) spill locations.

## *1.1 Background*

The release on the waterline was initially discovered on August 11, 2021, due to a hole in the water line on backbone of train 2. Chevron reported that 0.54 barrels (bbls) of crude oil and 5.03 bbls of produced water were released, with 0.54 bbls of crude oil and 2 bbls of produced water recovered. The affected area measures approximately 1,154 square feet. The initial C-141 was submitted to NMOCD District I on August 23, 2021. The waterline release was assigned incident number nAPP2123134861.

The release on the manifold was discovered on December 28, 2021, due to a hole in an 8-inch balon ball valve. Chevron reported that 14.03 bbls of produced water was released, with 7 bbls recovered. The affected area measures approximately 1,246 square feet. The initial C-141 was submitted to NMOCD District I on January 10, 2022. The manifold release was assigned incident number nAPP2201046595.

The produced water release was initially discovered on June 2, 2022, due to a pinhole leak along the water line due to possible corrosion. Chevron reported that 6 bbls of produced water was released, with no recovery. The affected area measures approximately 1,952 square feet. The initial C-141 was submitted to the NMOCD District I on June 14, 2022. The produced water release was assigned incident number nAPP2216545859. Appendix A presents the initial C-141's and Chevron spill calculations for the three (3) releases.

## *1.2 Physical Setting*

The physical setting is as follows:

- The surface elevation is approximately 3,174 feet above mean sea level (msl).
- The surface elevation gradually decreases to the southwest.
- There are no surface water features within 1,000 feet of the Site.
- Karst data provided by the USGS describes the Site as "Medium Risk" potential.
- The soils are designated as Pyote soils and Dune land, consisting of 0 to 30 inches fine sand, underlain by 30 to 60 inches of fine sandy loam.
- Surface geology is Quaternary deposits (Holocene) sand and silt, locally includes cover sand.
- Groundwater occurs at 70.12 feet below ground surface (bgs) based on depth to groundwater measurements taken 72 hours after installing a boring (SB-1) on April 28, 2020, approximately 0.31 mile or 1,809 feet southeast from the Site. The geodetic position for the groundwater bore is North 32.0329056° and West -103.6140528°.

Appendix B presents USGS data depicting karst risk potential. Appendix C presents the soil boring log. Figure 3 presents an aerial map showing the soil boring location.

### *1.3 Remediation Standards*

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

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

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

## 2.0 DELINEATION

The first release (nAPP2123134861) was fully delineated between February 1, 2022, and March 9, 2022. Additionally, the second release (nAPP2201046595) was fully delineated between February 1, 2022, and May 10, 2022. The delineation for both releases was reported to the NMOCD in the document titled "Tracking Number: nAPP2123134861 and nAPP2201046595, Delineation Report and Remediation Plan, Salado Draw 19 CTB Waterline & Manifold, Produced Water Releases, Lea County, New Mexico, June 9, 2022" and recommended the following remediation:

- Waterline Release: Excavate soil from an area measuring approximately 429 square feet encompassing S-3 to a depth of 1-foot bgs.
- Manifold Release: Excavate soil from an area measuring approximately 216 square feet encompassing S-4 to a depth of 1-foot bgs.
- Manifold Release: Excavate soil from an area measuring approximately 302 square feet encompassing S-5 and S-8 to a depth of 1.5 feet bgs.
- Manifold Release: Excavate soil from an area measuring approximately 951 square feet encompassing S-2, S-3, and S-5 to a depth of 4.1 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 on the pad at the waterline release and topsoil in the right of way at the manifold release assuming achievement of OCD remediation levels.
- Prepare report with photographs for submittal to OCD District I.

The NMOCD approved the remediation plan on August 11, 2022.

The third release (nAPP2216545859) was fully delineated on June 22, 2022. The delineation was reported to the NMOCD in the document titled "Tracking Number: nAPP2216545859, Delineation Report and Remediation Plan, Salado Draw 19 Central Tank Battery, Produced Water Release, Lea County, New Mexico, September 19, 2022" and recommended the following remediation:

- Excavate soil from an area measuring approximately 61 square feet encompassing S-4 and to a depth of 1-foot 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 on the pad assuming achievement of NMOCD remediation levels.
- Prepare report with photographs for submittal to NMOCD District I
- This remediation will be performed simultaneously with two (2) additional releases (nAPP2123134861 & nAPP2201046595) that occurred at the Site.

The NMOCD approved the remediation plan on September 26, 2022, and stated "*Going forward, please include the latitude and longitude of the dtw boring in report*". Figure 4a, 4b, and 4c presents Appendix D presents the NMOCD communications.

## 3.0 REMEDIATION

During April 2023, SDR Enterprises (SDR), under supervision from LAI personnel, began excavating soil from the first (nAPP2123134861) and third (nAPP2216545859) releases. Soil was excavated within the first release to a depth of approximately 1-foot bgs encompassing sample location S-3. Additionally, soil was excavated within the third release to a maximum depth of approximately 4.1 feet bgs., LAI personnel field tested currently with excavation activities to determine if further excavation was necessary according to the NMOCD delineation report and remediation plan. Excavated soil was stockpiled on a liner at the SD 19 CTB Site prior to being hauled to disposal at the Milestone Environmental Services Disposal Facility, northeast of Orla, Texas. On April 28, 2023, LAI personnel collected four (4) bottom and one (1) sidewall confirmation soil samples from the first release excavation area and collected two (2) bottom and two (2) sidewalls from the third release excavation area.

During April 2023, Warrior Technologies, LLC (Warrior), under supervision from LAI personnel, hydrovac excavated soil within the second release (nAPP2201046595). Soil was excavated to 1-foot bgs encompassing sample location S-4, 1.5 feet bgs encompassing sample locations S-5 and S-8, and 4.1 feet bgs encompassing sample locations S-2, S-3, and S-5. Hydrovac media (i.e., soil, rock, and water) was contained in vac boxes prior to being hauled to the Milestone Environmental Services Disposal Facility. Warrior also hydrovac excavated soil adjacent to production equipment within the third release (nAPP2216545859). LAI personnel collected eight (8) bottom and four (4) sidewall confirmation soil samples within the second release and one (1) bottom and one (1) sidewall confirmation soil sample within the third release.

The soil samples were delivered under chain of custody and preservation to the Eurofins – Xenco Laboratories (Xenco) in Midland, Texas. The laboratory analyzed all the confirmation soil samples for BTEX, TPH, and chloride by EPA SW-846 Methods 8021B, 8015M, and 300.0E, respectively. The laboratory reported the following results:

- Benzene, BTEX, TPH, and chloride within the first release (nAPP2123134861) were reported below the NMOCD remediation standards in all confirmation composite soil samples.
- Benzene, BTEX, and TPH within the second release (nAPP2201046595) were reported below the NMOCD remediation standards in all confirmation composite soil samples. Chloride reported above the NMOCD remediation standards of 600 mg/Kg from bottom samples C-1, C-3, C-4, C-7, and C-8 and sidewall samples C-2, C-10, C-11, and C-12.
- Benzene, BTEX, and TPH within the third release (nAPP2216545859) were reported below the NMOCD remediation standards in all confirmation composite soil samples. Chloride reported above the NMOCD remediation standards of 600 mg/Kg from sidewall sample C-6.

During July 2023, Warrior and SDR personnel excavated additional soil encompassing sample locations within the second release (nAPP2201046595) in 1-foot increments, where LAI personnel field tested concurrently with excavation activities to determine if further excavation was necessary. Subsequent laboratory analysis reported benzene, BTEX, TPH, and chloride below the NMOCD remediation standards in all confirmation soil samples listed in Table 1 of 19.15.29 NMAC. Table 2a, 2b, and 2c present the confirmation and backfill analytical data summary for nAPP2123134861, nAPP2201046595, and nAPP2216545859, respectively. Figure 5a, 5b, and 5c present the soil excavation areas and confirmation sample locations for nAPP2123134861, nAPP2201046595, and nAPP2216545859, respectively.

On June 12, 2023, SDR backfilled the first (nAPP2123134861) and third (nAPP2216545859) release areas on the pad with clean caliche. On August 1, 2023, SDR backfilled the second release (nAPP2201046595) area within the Right of Way (ROW) with clean topsoil. LAI personnel collected four (4) composite soil samples (BF-1, BF-2, BF-4, and BF-5) (sample ID BF-3 was not used) of clean topsoil and caliche from a nearby burrow pit. Xenco analyzed the samples for BTEX, TPH, and chloride. Benzene, BTEX, and TPH were below the method reporting limits (RL's) and chloride was less than 600 mg/kg. On August 4, 2023, LAI personnel seeded the excavation area within the second release (nAPP2201046595) with BLM mix #2. Appendix E presents the laboratory reports. Appendix F presents the photographic documentation.

# 4.0 CLOSURE/DEFERRAL REQUEST

Chevron requests no further action for nAPP2123134861.

Chevron requests a deferral for the second release (nAPP2201046595) where chloride at sidewall sample location C-2coincides with supports for the aboveground flow lines. Additionally, Chevron requests a deferral for the third release (nAPP2216545859) where TPH and chloride at sidewall sample location C-6 coincides with aboveground production equipment. Further excavation of these areas risks jeopardizing the integrity of the flow lines and production equipment resulting in additional environmental impacts. Figure 6 presents an area map showing the deferral areas.

# Tables

**Table 1a**
**Soil Sample Analytical Data Summary**
**SD 19 CTB - WaterlineRelease (nAPP2123134861)**
**Lea County, New Mexico**
**32° 02' 04.86805" North, 103° 37' 01.11924" West**



| 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 | 2/1/2022 | In-Situ | <0.00200 | <0.00399 | <50.0 | <50.0 | <50.0 | <50.0 | 30.4 |
| | 1 | 2/1/2022 | In-Situ | <0.00202 | <0.00403 | <49.9 | <49.9 | <49.9 | <49.9 | 19.0 |
| **S-2** | 0.5 | 2/1/2022 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | 149 |
| | 1 | 2/1/2022 | In-Situ | <0.00198 | <0.00397 | <49.9 | <49.9 | <49.9 | <49.9 | 186 |
| **S-3** | 0.5 | 2/1/2022 | In-Situ | <0.00199 | <0.00398 | <50.0 | 2,160 | <50.0 | **2,160** | 42.2 |
| | 1 | 2/1/2022 | In-Situ | <0.00199 | 0.0370 | <49.9 | 681 | <49.9 | **681** | 44.6 |
| | 1 | 3/9/2022 | In-Situ | <0.00200 | <0.00399 | <49.8 | <49.8 | <49.8 | <49.8 | 11.9 |
| | 3 | 3/9/2022 | In-Situ | <0.00198 | <0.00397 | <50.0 | <50.0 | <50.0 | <50.0 | <4.98 |
| | 5 | 3/9/2022 | In-Situ | <0.00199 | <0.00398 | <49.8 | <49.8 | <49.8 | <49.8 | <5.00 |
| | 10 | 3/9/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | 5.51 |
| **S-4** | 0.5 | 2/1/2022 | In-Situ | <0.00200 | <0.00400 | <50.0 | <50.0 | <50.0 | <50.0 | 17.5 |
| | 1 | 2/1/2022 | In-Situ | <0.00200 | <0.00399 | <50.0 | <50.0 | <50.0 | <50.0 | 23.7 |
| **S-5** | 0.5 | 2/1/2022 | In-Situ | <0.00200 | <0.00399 | <50.0 | <50.0 | <50.0 | <50.0 | 23.7 |
| **S-6** | 0.5 | 2/1/2022 | In-Situ | <0.00202 | <0.00403 | <50.0 | 54.3 | <50.0 | 54.3 | 133 |
| **S-7** | 0.5 | 2/1/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | 231 |
| **S-8** | 0.5 | 2/1/2022 | In-Situ | <0.00200 | <0.00400 | <50.0 | <50.0 | <50.0 | <50.0 | 278 |

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

**Table 1a**

**Soil Sample Analytical Data Summary**

**SD 19 CTB - WaterlineRelease (nAPP2123134861)**

**Lea County, New Mexico**

**32° 02' 04.86805" North, 103° 37' 01.11924" West**



| 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** |

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 2a**
**Confirmation Soil Sample Analytical Data Summary**
**Chevron - SD 19 CTB Waterline**
**Lea County, New Mexico**
**North 32° 02' 04.86805", West 103° 37' 01.11924"**

| 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** | | | | **100/2500** | **600/10,000** |
| **C-1** | Bottom | 1 | 4/28/2023 | In-Situ | <0.00200 | <0.00401 | <50.0 | <50.0 | <50.0 | <50.0 | 72.7 |
| **C-2** | Bottom | 1 | 4/28/2023 | In-Situ | <0.00200 | <0.00399 | <49.9 | <49.9 | <49.9 | <49.9 | 78.7 |
| **C-3** | Bottom | 1 | 4/28/2023 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | 144 |
| **C-4** | Bottom | 1 | 4/28/2023 | In-Situ | <0.00198 | <0.00396 | <50.0 | <50.0 | <50.0 | <50.0 | 130 |
| **C-5** | Sidewall | 0 - 1 | 4/28/2023 | In-Situ | <0.00201 | <0.00402 | <50.0 | <50.0 | <50.0 | <50.0 | 145 |
| **Backfill-2** | -- | -- | 5/11/2023 | In-Situ | <0.00198 | <0.00396 | <50.0 | <50.0 | <50.0 | <50.0 | 364 |
| **Backfill-4** | -- | -- | 5/11/2023 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | 220 |
| **Backfill-5** | -- | -- | 5/11/2023 | In-Situ | <0.00200 | <0.00399 | <50.0 | <50.0 | <50.0 | <50.0 | 183 |

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**

**Table 1b**
**Soil Sample Analytical Data Summary**
**SD 19 CTB - Manifold Release (nAPP2201046595)**
**Lea County, New Mexico**
**32° 02' 04.33" North, 103° 37' 02.69" West**



| 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 | 2/1/2022 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | 53.6 |
| | 1 | 2/1/2022 | In-Situ | <0.00201 | <0.00402 | <50.0 | <50.0 | <50.0 | <50.0 | 78.1 |
| **S-2** | 0.5 | 2/1/2022 | In-Situ | <0.00202 | <0.00403 | <50.0 | <50.0 | <50.0 | <50.0 | **4,190** |
| | 1 | 2/1/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | **953** |
| | 1 | 3/8/2022 | In-Situ | <0.0200 | <0.00400 | <49.8 | <49.8 | <49.8 | <49.8 | **5,960** |
| | 2 | 3/8/2022 | In-Situ | <0.00202 | <0.00403 | <50.0 | <50.0 | <50.0 | <50.0 | **4,350** |
| | 5 | 3/8/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | **3,420** |
| | 10 | 3/8/2022 | In-Situ | <0.00200 | <0.00398 | <49.8 | <49.8 | <49.8 | <49.8 | 13.7 |
| **S-3** | 0.5 | 2/1/2022 | In-Situ | <0.00200 | <0.00401 | <50.0 | 55.8 | <50.0 | 55.8 | **7,210** |
| | 1 | 2/1/2022 | In-Situ | <0.00201 | <0.00402 | <49.9 | <49.9 | <49.9 | <49.9 | **4,270** |
| | 1 | 3/8/2022 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | **7,370** |
| | 3 | 3/8/2022 | In-Situ | <0.00200 | <0.00399 | <50.0 | 185 | <50.0 | **185** | **20,700** |
| | 5 | 3/8/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | **4,850** |
| | 10 | 3/8/2022 | In-Situ | <0.00198 | <0.00397 | <50.0 | <50.0 | <50.0 | <50.0 | **3,560** |
| | 14 | 3/8/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | **881** |
| | 15 | 5/10/2022 | In-Situ | <0.00198 | <0.00396 | <49.8 | <49.8 | <49.8 | <49.8 | 233 |
| | 20 | 5/10/2022 | In-Situ | <0.00201 | <0.00402 | <50.0 | <50.0 | <50.0 | <50.0 | 72.0 |
| | 25 | 5/10/2022 | In-Situ | <0.00202 | <0.00403 | <50.0 | <50.0 | <50.0 | <50.0 | 78.0 |
| **S-4** | 0.5 | 2/1/2022 | In-Situ | <0.00202 | <0.00404 | <50.0 | <50.0 | <50.0 | <50.0 | **2,270** |
| | 1 | 2/1/2022 | In-Situ | <0.00202 | <0.00404 | <50.0 | <50.0 | <50.0 | <50.0 | 123 |
| **S-5** | 0.5 | 2/1/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | **3,240** |

**Table 1b**
**Soil Sample Analytical Data Summary**
**SD 19 CTB - Manifold Release (nAPP2201046595)**
**Lea County, New Mexico**
**32° 02' 04.33" North, 103° 37' 02.69" West**



| 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 | 2/1/2022 | In-Situ | <0.00201 | <0.00402 | <50.0 | <50.0 | <50.0 | <50.0 | **2,210** |
| | 1 | 3/8/2022 | In-Situ | <0.00201 | <0.00402 | <49.9 | <49.9 | <49.9 | <49.9 | 111 |
| | 3 | 3/8/2022 | In-Situ | <0.00202 | <0.0404 | <50.0 | <50.0 | <50.0 | <50.0 | 158 |
| | 5 | 3/8/2022 | In-Situ | <0.00202 | <0.00403 | <50.0 | <50.0 | <50.0 | <50.0 | <4.97 |
| | 10 | 3/8/2022 | In-Situ | <0.00200 | <0.0399 | <49.9 | <49.9 | <49.9 | <49.9 | 11.2 |
| **S-6** | 0.5 | 2/1/2022 | In-Situ | <0.00198 | <0.00397 | <49.9 | <49.9 | <49.9 | <49.9 | 126 |
| | 1 | 2/1/2022 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | 127 |
| **S-7** | 0.5 | 2/1/2022 | In-Situ | <0.00200 | <0.00401 | <50.0 | <50.0 | <50.0 | <50.0 | 116 |
| | 1 | 2/1/2022 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | 83.3 |
| **S-8** | 0.5 | 2/1/2022 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | **942** |
| | 1 | 2/1/2022 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | **855** |
| | 1 | 3/8/2022 | In-Situ | <0.00200 | <0.00400 | <50.0 | <50.0 | <50.0 | <50.0 | **822** |
| | 3 | 3/8/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | 37.6 |
| | 5 | 3/8/2022 | In-Situ | <0.00200 | <0.00401 | <50.0 | <50.0 | <50.0 | <50.0 | 16.5 |
| | 10 | 3/8/2022 | In-Situ | <0.00201 | <0.00402 | <49.8 | <49.8 | <49.8 | <49.8 | 5.26 |
| **S-9** | 0.5 | 3/8/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | 327 |
| | 1 | 3/8/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | 224 |
| **S-10** | 0.5 | 3/8/2022 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | 349 |
| | 1 | 3/8/2022 | In-Situ | <0.00200 | <0.00399 | <50.0 | <50.0 | 89.1 | 89.1 | 130 |

**Table 1b**

**Soil Sample Analytical Data Summary**

**SD 19 CTB - Manifold Release (nAPP2201046595)**

**Lea County, New Mexico**

**32° 02' 04.33" North, 103° 37' 02.69" West**



| 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** |

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**

**Table 2b**
**Confirmation Soil Sample Analytical Data Summary**
**SD 19 CTB Manifold**
**Lea County, New Mexico**
**32° 02' 04.33"N, 103° 37' 02.69"W**

| 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) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Closure Criteria:* | | | | | *10* | *50* | | | | *100/2,500* | *600/10,000* |
| **C-1** | Bottom | 1 | 05/09/2023 | Excavated | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | **2,850** |
| | | 4.1 | 07/20/2023 | In-Situ | <0.00398 | <0.00199 | <50.1 | <50.1 | <50.1 | <50.1 | 1,290 |
| **C-2*** | Sidewall | 0-4.1 | 05/09/2023 | In-Situ | <0.00200 | 0.0104 | <49.9 | <49.9 | <49.9 | <49.9 | **10,000** |
| **C-3** | Bottom | 1 | 05/09/2023 | Excavated | <0.00199 | 0.0149 | <49.9 | <49.9 | <49.9 | <49.9 | **4,250** |
| | | 4.1 | 07/20/2023 | In-Situ | <0.00198 | <0.00396 | <49.8 | <49.8 | <49.8 | <49.8 | 1,830 |
| **C-4** | Bottom | 1 | 05/09/2023 | Excavated | <0.00201 | <0.00402 | <50.0 | <50.0 | <50.0 | <50.0 | **6,480** |
| | | 4.1 | 07/20/2023 | In-Situ | <0.00201 | <0.00402 | <49.7 | <49.7 | <49.7 | <49.7 | 536 |
| **C-5** | Bottom | 4.1 | 05/09/2023 | In-Situ | <0.00202 | <0.00404 | <49.8 | <49.8 | <49.8 | <49.8 | 484 |
| **C-6** | Bottom | 4.1 | 05/09/2023 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | 801 |
| **C-7** | Bottom | 1.5 | 05/09/2023 | Excavated | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | **1,070** |
| | | 4.1 | 07/21/2023 | In-Situ | <0.00202 | <0.00403 | <50.2 | <50.2 | <50.2 | <50.2 | 997 |
| **C-8** | Bottom | 1.5 | 05/09/2023 | Excavated | <0.00200 | <0.00399 | <50.0 | <50.0 | <50.0 | <50.0 | **1,410** |
| | | 4.1 | 07/21/2023 | In-Situ | <0.00198 | <0.00396 | <49.9 | <49.9 | <49.9 | <49.9 | 576 |
| **C-9** | Bottom | 4.1 | 05/09/2023 | In-Situ | <0.00201 | <0.00402 | <49.9 | <49.9 | <49.9 | <49.9 | 1,060 |
| **C-10** | Sidewall | 0-4.1 | 05/09/2023 | Excavated | <0.00200 | <0.00401 | <49.8 | <49.8 | <49.8 | <49.8 | **1,670** |
| | | | 07/21/2023 | In-Situ | <0.00202 | <0.00403 | <50.5 | <50.5 | <50.5 | <50.5 | 535 |
| **C-11** | Sidewall | 0-4.1 | 05/09/2023 | Excavated | <0.00199 | <0.00398 | <49.8 | <49.8 | <49.8 | <49.8 | **748** |
| | | | 07/21/2023 | In-Situ | <0.00200 | <0.00400 | <50.3 | <50.3 | <50.3 | <50.3 | 130 |
| **C-12** | Sidewall | 0-1 | 05/09/2023 | Excavated | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | **1,440** |
| | | 0 - 4.1 | 07/21/2023 | In-Situ | <0.00199 | <0.00398 | <50.4 | <50.4 | <50.4 | <50.4 | 118 |
| **BF-1** | -- | -- | 07/25/2023 | In-Situ | <0.00202 | <0.00403 | <50.3 | <50.3 | <50.3 | <50.3 | 79.0 |

***Notes:***
*analysis performed by Eurofins-Xenco (Xenco), in Midland, Texas by EPA SW-846 Methods 8021B (BTEX) and 8015M (TPH), and EPA Method 300 (chloride)*
*mg/Kg: milligrams per kilogram; equivalent to parts per million (ppm)*
*<: indicates that parameter concentration is below method analytical reporting limit*

**Table 2b**
**Confirmation Soil Sample Analytical Data Summary**
**SD 19 CTB Manifold**
**Lea County, New Mexico**
**32° 02' 04.33"N, 103° 37' 02.69"W**

| 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) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Closure Criteria:*** | | | | | ***10*** | ***50*** | | | | ***100/2,500*** | ***600/10,000*** |

*Depth reported in feet below ground surface (bgs)*

** - Indicates sample locations around production equipment where a deferral is reqeusted*

*Bold and Highlighted indicates parameter concentration is above NMOCD closure criteria*

**Table 1c**
**Soil Sample Analytical Data Summary**
**SD 19 CTB Produced Water Release**
**Lea County, New Mexico**
**32° 02' 04.93676" North, 103° 37' 00.76533" West**



| 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 | 6/22/2022 | In-Situ | <0.00201 | <0.00402 | <49.9 | <49.9 | <49.9 | <49.9 | 69.2 |
| | 1 | 6/22/2022 | In-Situ | <0.00200 | <0.00399 | <50.0 | <50.0 | <50.0 | <50.0 | 58.8 |
| **S-2** | 0.5 | 6/22/2022 | In-Situ | <0.00198 | <0.00397 | <50.0 | <50.0 | <50.0 | <50.0 | 95.2 |
| | 1 | 6/22/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | 58.1 |
| **S-3** | 0.5 | 6/22/2022 | In-Situ | <0.00200 | <0.00401 | <49.8 | <49.8 | <49.8 | <49.8 | 31.6 |
| | 1 | 6/22/2022 | In-Situ | <0.00201 | <0.00402 | <50.0 | <50.0 | <50.0 | <50.0 | 27.1 |
| **S-4** | 0.5 | 6/22/2022 | In-Situ | <0.00199 | <0.00398 | <49.9 | <49.9 | <49.9 | <49.9 | **919** |
| | 1 | 6/22/2022 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | 199 |
| **S-5** | 0.5 | 6/22/2022 | In-Situ | <0.00202 | <0.00404 | <49.8 | <49.8 | <49.8 | <49.8 | 0.114 |
| **S-6** | 0.5 | 6/22/2022 | In-Situ | <0.00200 | <0.00399 | <49.9 | <49.9 | <49.9 | <49.9 | 30.0 |
| **S-7** | 0.5 | 6/22/2022 | In-Situ | <0.00200 | <0.00401 | <49.8 | <49.8 | <49.8 | <49.8 | 218 |
| **S-8** | 0.5 | 6/22/2022 | In-Situ | <0.00200 | <0.00399 | <49.9 | <49.9 | <49.9 | <49.9 | 48.1 |

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**

**Table 2c**
**Confirmation Soil Sample Analytical Data Summary**
**Chevron - SD 19 CTB Produced Water Release**
**Lea County, New Mexico**
**North 32° 02' 04.93676", West 103° 37' 00.76533"**

| 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** | | | | **100/2500** | **600/10,000** |
| **C-1** | Bottom | 4.1 | 4/28/2023 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | 121 |
| **C-2** | Bottom | 2 | 4/28/2023 | In-Situ | <0.00200 | <0.00399 | <49.9 | <49.9 | <49.9 | <49.9 | 126 |
| **C-3** | Sidewall | 0 - 4.1 | 4/28/2023 | In-Situ | <0.00201 | <0.00402 | <50.0 | <50.0 | <50.0 | <50.0 | 445 |
| **C-4** | Sidewall | 0 - 2 | 4/28/2023 | In-Situ | <0.00202 | <0.00404 | <50.0 | <50.0 | <50.0 | <50.0 | 197 |
| **C-5** | Bottom | 1 | 5/31/2023 | In-Situ | <0.00198 | <0.00396 | <49.9 | <49.9 | <49.9 | <49.9 | 261 |
| **C-6*** | Sidewall | 0 - 1 | 5/31/2023 | In-Situ | <0.00202 | <0.00404 | <50.0 | 444 | <50.0 | **444** | **7,070** |
| **Backfill-2** | -- | -- | 5/11/2023 | In-Situ | <0.00198 | <0.00396 | <50.0 | <50.0 | <50.0 | <50.0 | 364 |
| **Backfill-4** | -- | -- | 5/11/2023 | In-Situ | <0.00199 | <0.00398 | <50.0 | <50.0 | <50.0 | <50.0 | 220 |
| **Backfill-5** | -- | -- | 5/11/2023 | In-Situ | <0.00200 | <0.00399 | <50.0 | <50.0 | <50.0 | <50.0 | 183 |

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)

* - Sidewall sample location located adjacent to production equipment

**Bold and Highlighted Denotes Conetrations Above OCD Closure Criteria**

# Figures

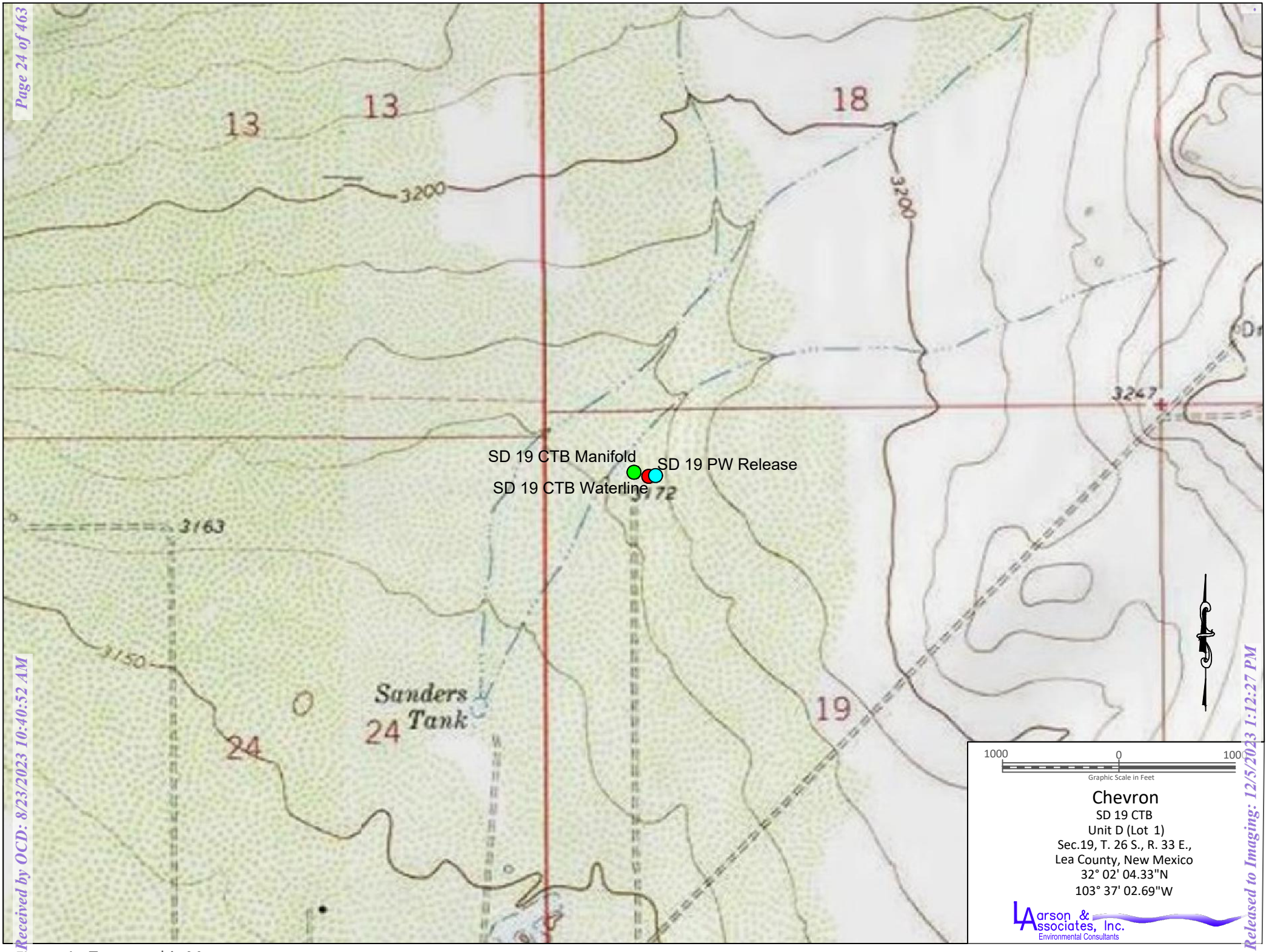


Figure 1 - Topographic Map

Received by OCD: 8/23/2023 10:40:52 AM

Released to Imaging: 12/5/2023 1:12:27 PM

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Figure 2 - Aerial Map Showing Waterline, Manifold, Produced Water Release Locations

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Figure 3 - Aerial Map Showing Boring Location

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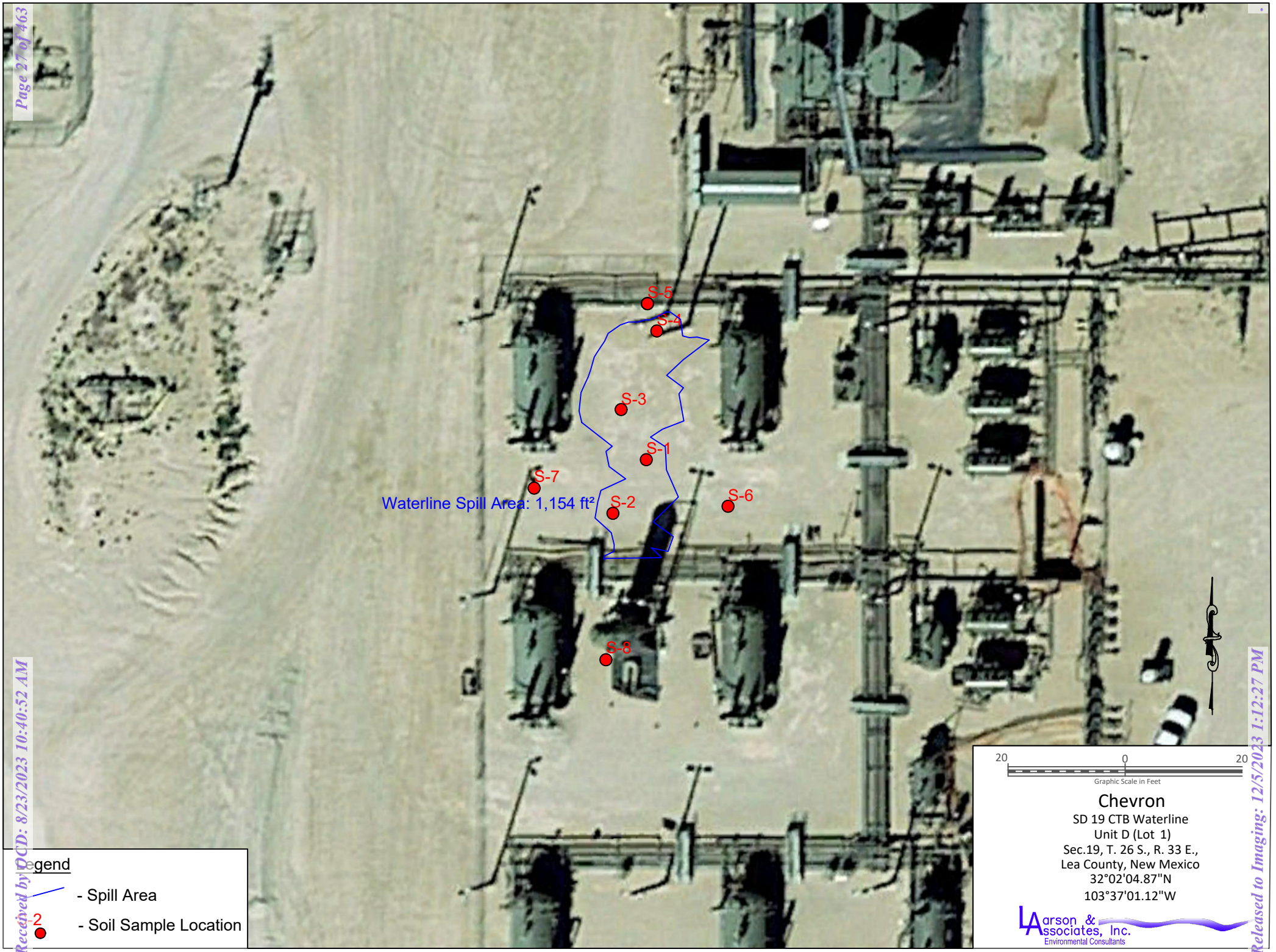


Figure 4a - Aerial Map Showing Waterline Delineation Sample Locations

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Figure 4b - Aerial Map Showing Manifold Delineation Sample Locations

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Figure 4c - Aerial Map Showing Produced Water Delineation Release Sample Locations

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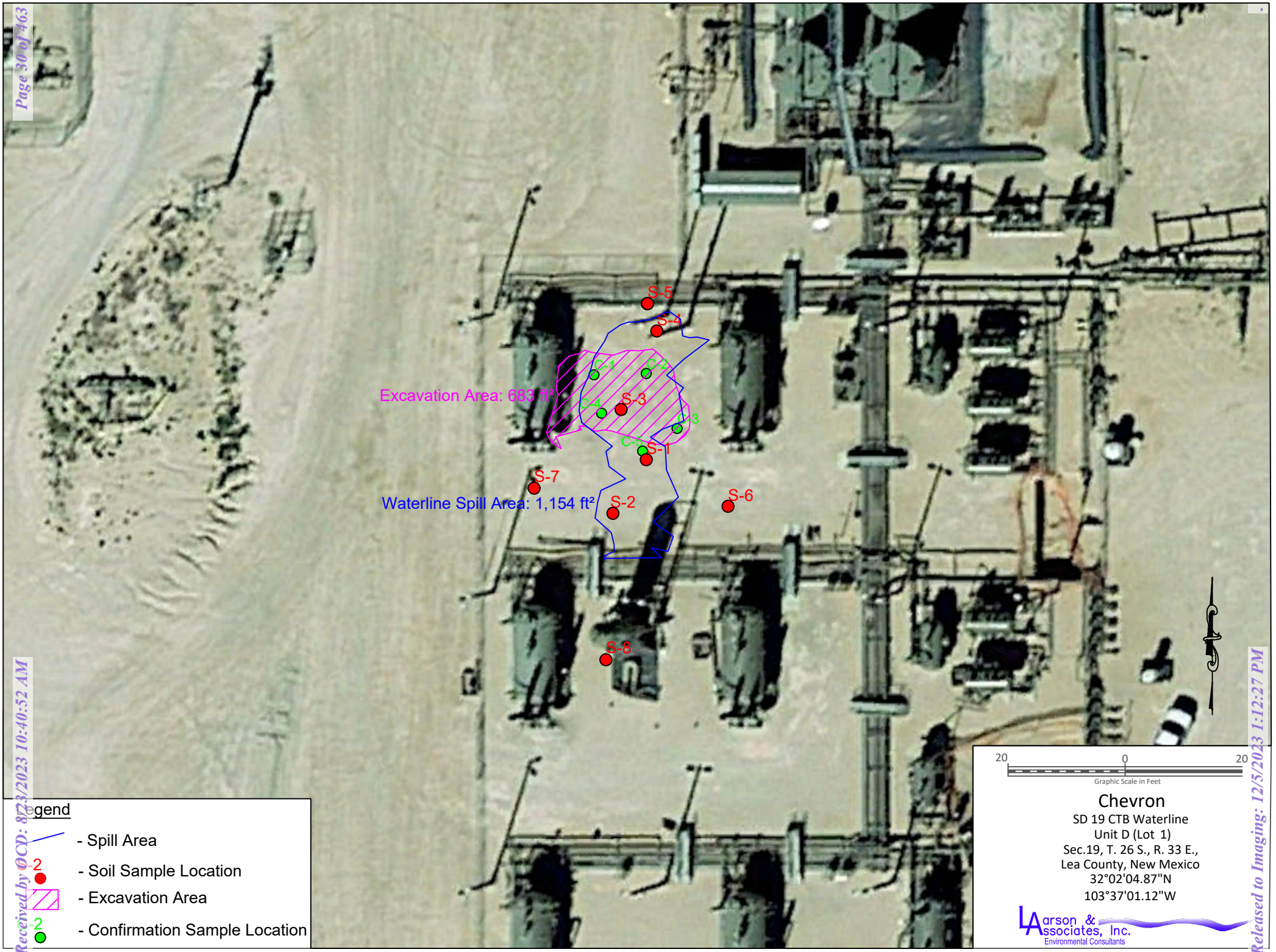


Figure 5a - Aerial Map Showing Waterline Confirmation Sample Locations

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Released to Imaging: 12/5/2023 1:12:27 PM

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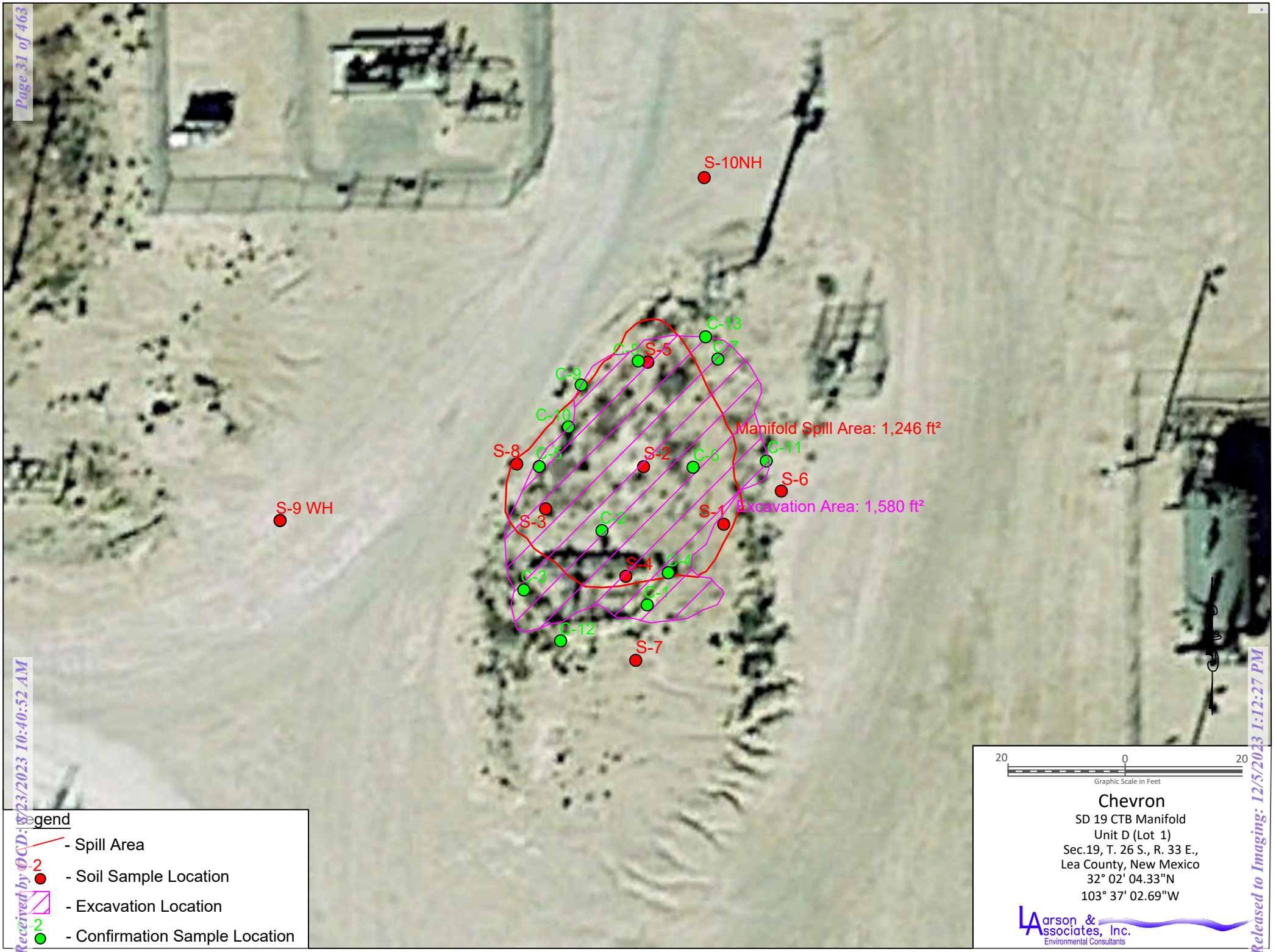


Figure 5b - Aerial Map Showing Manifold Confirmation Sample Locations

Received by OCD: 8/23/2023 10:40:52 AM

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Received by OCD: 8/23/2023 10:40:52 AM

Released to Imaging: 12/5/2023 1:12:27 PM

Figure 5c - Aerial Map Showing Produced Water Release Confirmation Sample Locations

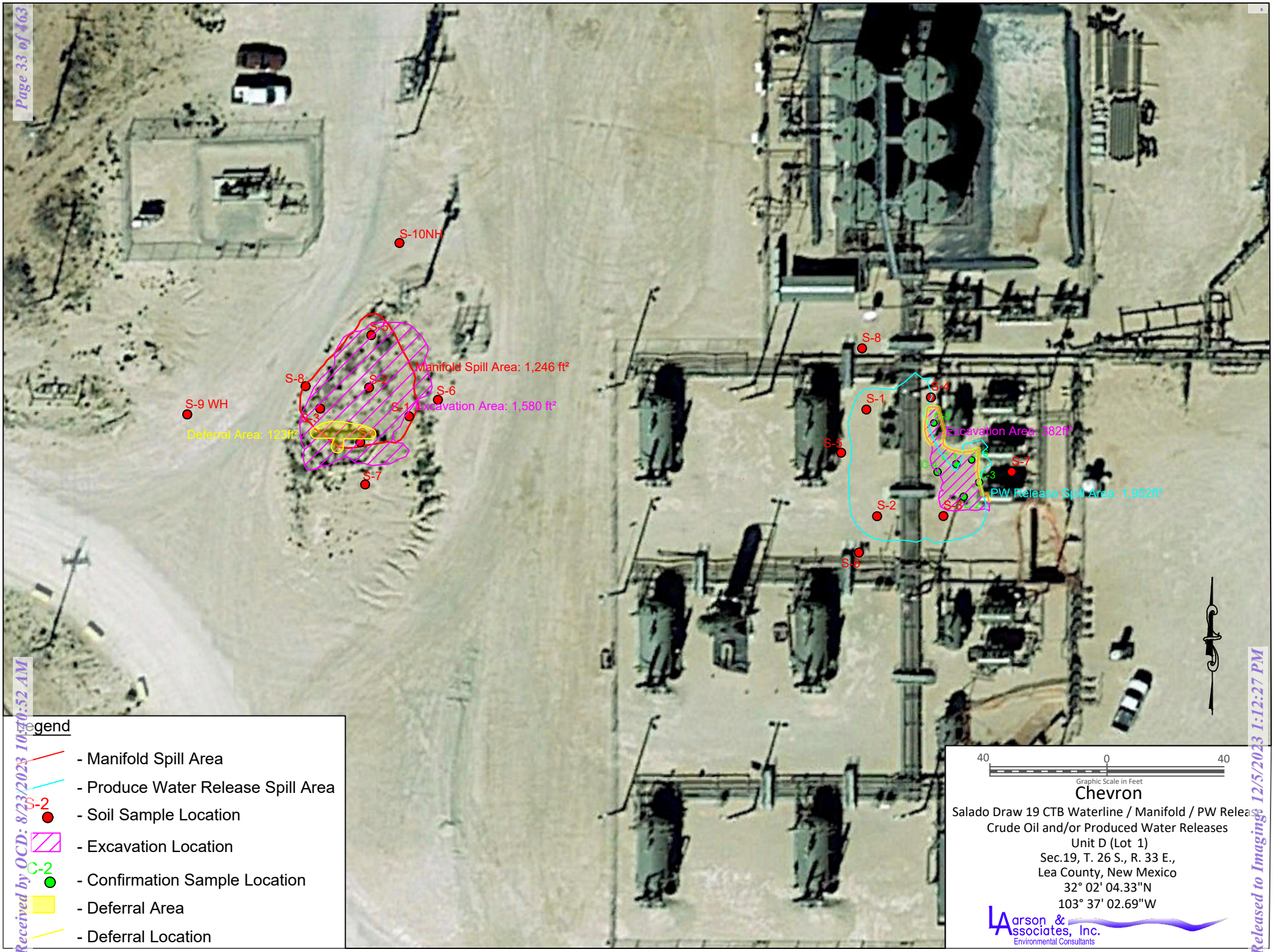


Figure 6 - Aerial Map Showing Deferral Areas

Received by OCD: 8/23/2023 10:10:52 AM
Released to Imaging: 12/5/2023 1:12:27 PM

# Appendix A

## Initial C-141's

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

| | |
|---|---|
| Incident ID | nAPP2123134861 |
| District RP | |
| Facility ID | |
| Application ID | |

# Release Notification

## Responsible Party

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

## Location of Release Source

Latitude 32.03476288 Longitude -103.6169817
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name: Salado Draw 19 CTB | Site Type: Oil |
| Date Release Discovered: 8-11-21 | API# *(if applicable)* |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| D | 19 | 26S | 33E | Lea |

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

## Nature and Volume of Release

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

| | | |
|---|---|---|
| ☒ Crude Oil | Volume Released (bbls) .54 bbls | Volume Recovered (bbls) .54bbls |
| ☒ Produced Water | Volume Released (bbls) 5.03 bbls | Volume Recovered (bbls) 2 bbls |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | ☐ Yes ☐ No |
| ☐ Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| ☐ Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |
| Cause of Release: Hole in water line on backbone of train 2 | | |

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nAPP2123134861 |
| District RP | |
| Facility ID | |
| Application ID | |

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

## Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Amy Barnhill_____ Title: Water Specialist_____

Signature: _____ Date: 8-23-21_____

email: ABarnhill@chevron.com_____ Telephone: 432-687-7108_____

**OCD Only**

Received by: _____ Date: _____

| | |
|---|---|
| Incident ID | nAPP2123134861 |
| District RP | |
| Facility ID | |
| Application ID | |

## Spill Calculations:

| Rectangle |
|---|
| 33 ft x 20 ft x .500 in |
| 5.082 bbl |
| .184 bbl |
| 4.758 bbl |
| 90% |
| .015 bbl |
| .500 in |

| Triangle |
|---|
| 8 ft x 8 ft x .250 in |
| .154 bbl |
| .036 bbl |
| 0.175 bbl |
| 95% |
| .017 bbl |
| .500 in |

| Rectangle |
|---|
| 20 ft x 15 ft x 0 in |
| .334 bbl |
| .334 bbl |
| 0.651 bbl |

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

| | |
|---|---|
| Incident ID | nAPP2201046595 |
| District RP | |
| Facility ID | |
| Application ID | |

# Release Notification

## Responsible Party

| | |
|---|---|
| Responsible Party: Chevron USA | OGRID: 4323 |
| Contact Name: Amy Barnhill | Contact Telephone432-687-7108 |
| Contact email: ABarnhill@chevron.com | Incident # *(assigned by OCD)* |
| Contact mailing address: 6301 Deauville Blvd Midland, Tx 79706 | |

## Location of Release Source

Latitude: **32.03472523** Longitude: **-103.61733653**
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name: Salado Draw 19 CTB | Site Type: Oil |
| Date Release Discovered: 12-28-21 | API# *(if applicable)* |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| D | 19 | 26S | 33E | Lea |

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

## Nature and Volume of Release

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

| | | |
|---|---|---|
| ☐ Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| ☒ Produced Water | Volume Released (bbls): 14.03 | Volume Recovered (bbls): 7 |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | ☐ Yes ☐ No |
| ☐ Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| ☐ Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release: **Field Specialist found a leak at Salado Draw water corridor riser by CTB 19. Leak was coming from a 1/2 inch hole in an 8 inch Balon ball valve.**

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nAPP2201046595 |
| District RP | |
| Facility ID | |
| Application ID | |

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

## Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Amy Barnhill Title: Water Specialist

Signature: Amy Barnhill Date: 1-10-22

email: ABarnhill@chevron.com Telephone: 432-687-7108

**OCD Only**

Received by: Date:

| | |
|---|---|
| Incident ID | nAPP2201046595 |
| District RP | |
| Facility ID | |
| Application ID | |

## Spill Calculations:

Area 1
Shape: Rectangle
Secondary Containment?: No
Standing Liquid Dimensions: 15 ft x 20 ft x 3 in
Standing Liquid Volume: 14.026 bbl

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

| | |
|---|---|
| Incident ID | nAPP2216545859 |
| District RP | |
| Facility ID | |
| Application ID | |

# Release Notification

## Responsible Party

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

## Location of Release Source

Latitude 32.04057543 Longitude -103.65976573
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name: Salado Draw CTB 19 | Site Type: Oil |
| Date Release Discovered: 6-2-22 | API# *(if applicable)* |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| D | 15 | 26S | 32E | Lea |

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

## Nature and Volume of Release

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

| | | |
|---|---|---|
| ☐ Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| ☒ Produced Water | Volume Released (bbls) 6 bbls | Volume Recovered (bbls) 0 |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | ☒ Yes ☐ No |
| ☐ Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| ☐ Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |
| Cause of Release: Pinhole leak along water line. Possible corrosion. | | |

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nAPP2216545859 |
| District RP | |
| Facility ID | |
| Application ID | |

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

## Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Amy Barnhill Title: Water Specialist

Signature: Amy Barnhill Date: 6-14-22

email: ABarnhill@chevron.com Telephone: 432-687-7108

**OCD Only**

Received by: Date:

| | |
|---|---|
| Incident ID | nAPP2216545859 |
| District RP | |
| Facility ID | |
| Application ID | |

## Spill Calculations:

**Reported Volumes**
**Oil Released: bbl**
**Oil Recovered: bbl**
**Water Released: 6bbl**
**Water Recovered: bbl**

calculations are a circle 30 ft diameter with a depth of .250, 100% water cut.

# Appendix B

# Karst Risk Potential

Salado Draw 19 Central Tank Battery
Medium

# Appendix C

# Soil Boring Log

# BORING RECORD

Start: 12:20 MDT
Finish: 15:40

| GEOLOGIC UNIT | DEPTH | DESCRIPTION LITHOLOGIC | DESCRIPTION USCS | GRAPHIC LOG |
|---|---|---|---|---|
| | 0 | Silty Sand, 5YR 5/4, Reddish Brown, Very Fine Grained Quartz Sand, Poorly Sorted, Dry | ML | |
| | 6 | 2.5YR 5/4, Light Reddish Brown, Below 4 ft | | |
| | 10 | Caliche, 7.5YR 8/2, Pinkish White, Coarse Grained, Poorly Sorted, Dry | Caliche | |
| | 20 | | | |
| | 25 | Silty Sand, 2.5YR 6/4, Light Reddish Brown, Fine Grained, Well Sorted, Dry | ML | |
| | 30 | | | |
| | 40 | | | |
| | 50 | Began Injecting Water | | |
| | 55 | Caliche, 7.5YR 8/2, Pinkish White, Fine Grained, Dry | Caliche | |
| | 60 | | | |
| | 66 | Silty Sand, 7.5YR 4/2, Fine Grained Quartz Sand, Well Sorted, Dry | ML | |
| 70.12' Depth of Water | 70 | | | |
| | 80 | | | |
| | 90 | | | |
| | 100 | | | |
| | 110 | TD: 110.75' | | |

PID READING
PPM X 1
2 4 6 8 10 12 14 16 18

| SAMPLE NUMBER | PID READING | RECOVERY | DEPTH |
|---|---|---|---|
| 1 | | | 6 |
| 2 | | | 25 |
| 3 | | | 55 |
| 4 | | | 66 |
| 5 | | | 110.75 |

REMARKS
BACKGROUND PID READING
SOIL : _____ PPM
SOIL : _____ PPM

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 )
NR NO RECOVERY

Larson & Associates, Inc.
Environmental Consultants

DRILL DATE : 04-09-2020
BORING NUMBER : SB-01

JOB NUMBER : Chevron/19-0180-05
HOLE DIAMETER : 2"
LOCATION : Salado Draw Frac Pond 19 32.0329056°, -103.6140528°
LAI GEOLOGIST : E. Chavez
DRILLING CONTRACTOR : Scarborough
DRILLING METHOD : Air Rotary

# Appendix D

# NMOCD Communications

## Robert Nelson

**From:** Robert Nelson
**Sent:** Wednesday, June 7, 2023 4:40 PM
**To:** Nobui, Jennifer, EMNRD
**Cc:** Barnhill, Amy D.
**Subject:** Salado Draw 19 CTB (nAPP2123134861 and nAPP2216545859) Excavation Backfill Notice
**Attachments:** Table 2 Confirmation Soil Sample Analytical Data Summary - SD 19 CTB Waterline.pdf; Table 2b Confirmation Soil Sample Analytical Data Summary - SD 19 CTB Prodcued Water Release.pdf; Figure 4a - Aerial Map Showing Excavation Location and Confirmation Samples.pdf; Figure 4 - Aerial Map Showing Excavation Location and Confirmation Samples Deferral SW.pdf

Hello Ms. Nobui,

Larson & Associates, Inc. (LAI), on behalf of Chevron USA, submits the attached confirmation laboratory analytical data and sample location maps for the New Mexico Oil Conservation Division (OCD) District I to provide two (2) business days notification prior to backfilling the two (2) excavation areas at the Salado Draw 19 CTB (nAPP2123134861 and nAPP2216545859) in Lea County, New Mexico. Please feel free to contact Amy Barnhill with Chevron at (432)687-7723 or ABarnhill@Chevron.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
Larson & Associates, Inc.
Environmental Consultants

## Robert Nelson

**From:** Robert Nelson
**Sent:** Friday, July 28, 2023 8:35 AM
**To:** Hamlet, Robert, EMNRD; Velez, Nelson, EMNRD
**Cc:** Barnhill, Amy D.; Mark Larson
**Subject:** Salado Draw 19 CTB Manifold (nAPP2201046595) Excavation Backfill Notification
**Attachments:** Table-2_Confirmation-Sample-Analytical-Summary_SD-19-CTB-Manifold.pdf; Figure 4b - Aerial Map Showing Excavation Area.pdf

Hello Mr. Hamlet and Mr. Velez,

Larson & Associates, Inc. (LAI), on behalf of Chevron USA, submits the attached confirmation (post remediation) laboratory analysis data and sample location map to the New Mexico Oil Conservation Division (OCD) District I for provide two (2) business days notification prior to backfilling the excavation at the Salado Draw 19 CTB Manifold (nAPP2201046595) in Lea County, New Mexico. A deferral for sidewall sample location C-2 has been requested based on proximity to production equipment. Please feel free to contact Amy Barnhill with Chevron at ABarnhill@Chevron.com, Mark Larson at (432)687-0901) 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

Larson & Associates, Inc.
Environmental Consultants

# Appendix E

# Laboratory Reports

eurofins | Environment Testing America

# ANALYTICAL REPORT

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

Laboratory Job ID: 880-10893-1
Laboratory Sample Delivery Group: 22-0105-01
Client Project/Site: SD 19 CTB - Waterline

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

Attn: Mr. Mark J Larson

Holly Taylor

*Authorized for release by:*
*2/10/2022 2:47:52 PM*

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

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

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

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

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Laboratory Job ID: 880-10893-1
SDG: 22-0105-01

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QC Association Summary . . . . . 24
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# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-10893-1
Project/Site: SD 19 CTB - Waterline SDG: 22-0105-01

## Qualifiers

### GC 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. |

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Job ID: 880-10893-1

**Laboratory: Eurofins Midland**

**Narrative**

**Job Narrative**
**880-10893-1**

**Receipt**
The samples were received on 2/2/2022 11:10 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 -8.8°C

**GC VOA**
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18467 and analytical batch 880-18404 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

**GC Semi VOA**
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-18410 and analytical batch 880-18623 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: S-2 0.5' (880-10893-3). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: S-3 0.5' (880-10893-5), S-3 1' (880-10893-6), (LCSD 880-18779/3-A), (880-10781-A-22-D), (880-10781-A-22-E MS) and (880-10781-A-22-F 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.

**HPLC/IC**
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-18572 and 880-18572 and analytical batch 880-18733 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-1 0.5'

**Lab Sample ID: 880-10893-1**
**Matrix: Solid**
**Date Collected: 02/01/22 13:20**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:02 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:02 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:02 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:02 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:02 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *115* | | *70 - 130* | *02/03/22 09:51* | *02/04/22 08:02* | *1* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* | *02/03/22 09:51* | *02/04/22 08:02* | *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 | | | 02/07/22 15:39 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U F2 | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 00:37 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U F2 | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 00:37 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 00:37 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *80* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 00:37* | *1* |
| *o-Terphenyl (Surr)* | *89* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 00:37* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **30.4** | **F1** | 4.95 | | mg/Kg | | | 02/09/22 22:08 | 1 |

## Client Sample ID: S-1 1'

**Lab Sample ID: 880-10893-2**
**Matrix: Solid**
**Date Collected: 02/01/22 13:21**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:22 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:22 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:22 | 1 |
| m,p-Xylenes | <0.00403 | U | 0.00403 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:22 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:22 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *02/03/22 09:51* | *02/04/22 08:22* | *1* |
| *1,4-Difluorobenzene (Surr)* | *86* | | *70 - 130* | *02/03/22 09:51* | *02/04/22 08:22* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-1 1'

**Date Collected: 02/01/22 13:21**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10893-2**
**Matrix: Solid**

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 02/07/22 15:39 | 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 | | | 02/08/22 16:56 | 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 | | 02/02/22 15:57 | 02/06/22 01:39 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 01:39 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 01:39 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *70* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 01:39* | *1* |
| *o-Terphenyl (Surr)* | *78* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 01:39* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **19.0** | | 5.01 | | mg/Kg | | | 02/09/22 22:23 | 1 |

## Client Sample ID: S-2 0.5'

**Date Collected: 02/01/22 13:22**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10893-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:43 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:43 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:43 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:43 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:43 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 08:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *70 - 130* | *02/03/22 09:51* | *02/04/22 08:43* | *1* |
| *1,4-Difluorobenzene (Surr)* | *93* | | *70 - 130* | *02/03/22 09:51* | *02/04/22 08:43* | *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 | | | 02/07/22 15:39 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 02:00 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 02:00 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-2 0.5'

**Lab Sample ID: 880-10893-3**
**Matrix: Solid**
**Date Collected: 02/01/22 13:22**
**Date Received: 02/02/22 11:10**

### 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 | | 02/02/22 15:57 | 02/06/22 02:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *68* | *S1-* | *70 - 130* | *02/02/22 15:57* | *02/06/22 02:00* | *1* |
| *o-Terphenyl (Surr)* | *75* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 02:00* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **149** | | 4.98 | | mg/Kg | | | 02/09/22 22:27 | 1 |

## Client Sample ID: S-2 1'

**Lab Sample ID: 880-10893-4**
**Matrix: Solid**
**Date Collected: 02/01/22 13:23**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U F1 | 0.00198 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:43 | 1 |
| Toluene | <0.00198 | U F1 | 0.00198 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:43 | 1 |
| Ethylbenzene | <0.00198 | U F1 | 0.00198 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:43 | 1 |
| m,p-Xylenes | <0.00397 | U F1 | 0.00397 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:43 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:43 | 1 |
| Xylenes, Total | <0.00397 | U F1 | 0.00397 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *237* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 02:43* | *1* |
| *1,4-Difluorobenzene (Surr)* | *72* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 02:43* | *1* |

### 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 | | | 02/04/22 16:59 | 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 | | | 02/08/22 16:56 | 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 | | 02/02/22 15:57 | 02/06/22 02:21 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 02:21 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 02:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *78* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 02:21* | *1* |
| *o-Terphenyl (Surr)* | *86* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 02:21* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **186** | | 4.99 | | mg/Kg | | | 02/09/22 22:32 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-3 0.5'

**Lab Sample ID: 880-10893-5**
**Matrix: Solid**
**Date Collected: 02/01/22 13:24**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:10 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:10 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:10 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:10 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:10 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:10 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *223* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 03:10* | *1* |
| *1,4-Difluorobenzene (Surr)* | *77* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 03:10* | *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 | | | 02/07/22 15:39 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **2160** | | 50.0 | | mg/Kg | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/07/22 17:05 | 02/08/22 15:47 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **2160** | | 50.0 | | mg/Kg | | 02/07/22 17:05 | 02/08/22 15:47 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/07/22 17:05 | 02/08/22 15:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *66* | *S1-* | *70 - 130* | *02/07/22 17:05* | *02/08/22 15:47* | *1* |
| *o-Terphenyl (Surr)* | *71* | | *70 - 130* | *02/07/22 17:05* | *02/08/22 15:47* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **42.2** | | 4.95 | | mg/Kg | | | 02/09/22 22:37 | 1 |

## Client Sample ID: S-3 1'

**Lab Sample ID: 880-10893-6**
**Matrix: Solid**
**Date Collected: 02/01/22 13:25**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:37 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:37 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:37 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:37 | 1 |
| **o-Xylene** | **0.0370** | | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:37 | 1 |
| **Xylenes, Total** | **0.0370** | | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 03:37 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *173* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 03:37* | *1* |
| *1,4-Difluorobenzene (Surr)* | *77* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 03:37* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-3 1'

**Lab Sample ID: 880-10893-6**
**Matrix: Solid**
**Date Collected: 02/01/22 13:25**
**Date Received: 02/02/22 11:10**

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total BTEX** | **0.0370** | | 0.00398 | | mg/Kg | | | 02/07/22 15:39 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **681** | | 49.9 | | mg/Kg | | | 02/08/22 16:56 | 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 | | 02/07/22 17:05 | 02/08/22 16:08 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **681** | | 49.9 | | mg/Kg | | 02/07/22 17:05 | 02/08/22 16:08 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/07/22 17:05 | 02/08/22 16:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *65* | *S1-* | *70 - 130* | *02/07/22 17:05* | *02/08/22 16:08* | *1* |
| *o-Terphenyl (Surr)* | *69* | *S1-* | *70 - 130* | *02/07/22 17:05* | *02/08/22 16:08* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **44.6** | | 5.04 | | mg/Kg | | | 02/09/22 22:52 | 1 |

## Client Sample ID: S-4 0.5'

**Lab Sample ID: 880-10893-7**
**Matrix: Solid**
**Date Collected: 02/01/22 13:26**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:03 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:03 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:03 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:03 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:03 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *175* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 04:03* | *1* |
| *1,4-Difluorobenzene (Surr)* | *96* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 04:03* | *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 | | | 02/07/22 15:39 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 03:22 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 03:22 | 1 |

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# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-4 0.5'

**Lab Sample ID: 880-10893-7**
**Matrix: Solid**
**Date Collected: 02/01/22 13:26**
**Date Received: 02/02/22 11:10**

### 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 | | 02/02/22 15:57 | 02/06/22 03:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *79* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 03:22* | *1* |
| *o-Terphenyl (Surr)* | *88* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 03:22* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **17.5** | | 5.05 | | mg/Kg | | | 02/09/22 22:57 | 1 |

## Client Sample ID: S-5 0.5'

**Lab Sample ID: 880-10893-8**
**Matrix: Solid**
**Date Collected: 02/01/22 13:28**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:31 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:31 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:31 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:31 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:31 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *190* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 04:31* | *1* |
| *1,4-Difluorobenzene (Surr)* | *86* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 04:31* | *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 | | | 02/07/22 15:39 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 03:42 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 03:42 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 03:42 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *73* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 03:42* | *1* |
| *o-Terphenyl (Surr)* | *81* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 03:42* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **23.7** | | 5.00 | | mg/Kg | | | 02/09/22 23:01 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-6 0.5'

**Lab Sample ID: 880-10893-9**
**Matrix: Solid**
**Date Collected: 02/01/22 13:30**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:58 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:58 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:58 | 1 |
| m,p-Xylenes | <0.00403 | U | 0.00403 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:58 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:58 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 04:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *152* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 04:58* | *1* |
| *1,4-Difluorobenzene (Surr)* | *88* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 04:58* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 02/07/22 15:39 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **54.3** | | 50.0 | | mg/Kg | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/07/22 17:05 | 02/08/22 16:30 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **54.3** | | 50.0 | | mg/Kg | | 02/07/22 17:05 | 02/08/22 16:30 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/07/22 17:05 | 02/08/22 16:30 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *70* | | *70 - 130* | *02/07/22 17:05* | *02/08/22 16:30* | *1* |
| *o-Terphenyl (Surr)* | *75* | | *70 - 130* | *02/07/22 17:05* | *02/08/22 16:30* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **133** | | 4.98 | | mg/Kg | | | 02/09/22 23:06 | 1 |

## Client Sample ID: S-7 0.5'

**Lab Sample ID: 880-10893-10**
**Matrix: Solid**
**Date Collected: 02/01/22 13:32**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:25 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:25 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:25 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:25 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:25 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:25 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *165* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 05:25* | *1* |
| *1,4-Difluorobenzene (Surr)* | *108* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 05:25* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-7 0.5'

**Lab Sample ID: 880-10893-10**
**Matrix: Solid**
**Date Collected: 02/01/22 13:32**
**Date Received: 02/02/22 11:10**

### 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 | | | 02/07/22 15:39 | 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 | | | 02/08/22 16:56 | 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 | | 02/02/22 15:57 | 02/06/22 04:23 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 04:23 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 04:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *78* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 04:23* | *1* |
| *o-Terphenyl (Surr)* | *86* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 04:23* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **231** | | 4.99 | | mg/Kg | | | 02/09/22 23:11 | 1 |

## Client Sample ID: S-8 0.5'

**Lab Sample ID: 880-10893-11**
**Matrix: Solid**
**Date Collected: 02/01/22 13:34**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:53 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:53 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:53 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:53 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:53 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 05:53 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *152* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 05:53* | *1* |
| *1,4-Difluorobenzene (Surr)* | *96* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 05:53* | *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 | | | 02/07/22 15:39 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 05:04 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/06/22 05:04 | 1 |

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# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

**Client Sample ID: S-8 0.5'**
**Date Collected: 02/01/22 13:34**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10893-11**
**Matrix: Solid**

## 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 | | 02/02/22 15:57 | 02/06/22 05:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *81* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 05:04* | *1* |
| *o-Terphenyl (Surr)* | *87* | | *70 - 130* | *02/02/22 15:57* | *02/06/22 05:04* | *1* |

## Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **278** | **F1** | 5.00 | | mg/Kg | | | 02/09/22 23:16 | 1 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## 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) |
| 880-10891-A-22-D MS | Matrix Spike | 114 | 94 |
| 880-10891-A-22-E MSD | Matrix Spike Duplicate | 126 | 101 |
| 880-10893-1 | S-1 0.5' | 115 | 90 |
| 880-10893-2 | S-1 1' | 105 | 86 |
| 880-10893-3 | S-2 0.5' | 112 | 93 |
| 880-10893-4 | S-2 1' | 237 S1+ | 72 |
| 880-10893-4 MS | S-2 1' | 168 S1+ | 98 |
| 880-10893-4 MSD | S-2 1' | 157 S1+ | 105 |
| 880-10893-5 | S-3 0.5' | 223 S1+ | 77 |
| 880-10893-6 | S-3 1' | 173 S1+ | 77 |
| 880-10893-7 | S-4 0.5' | 175 S1+ | 96 |
| 880-10893-8 | S-5 0.5' | 190 S1+ | 86 |
| 880-10893-9 | S-6 0.5' | 152 S1+ | 88 |
| 880-10893-10 | S-7 0.5' | 165 S1+ | 108 |
| 880-10893-11 | S-8 0.5' | 152 S1+ | 96 |
| LCS 880-18464/1-A | Lab Control Sample | 117 | 101 |
| LCS 880-18467/1-A | Lab Control Sample | 180 S1+ | 95 |
| LCSD 880-18464/2-A | Lab Control Sample Dup | 114 | 102 |
| LCSD 880-18467/2-A | Lab Control Sample Dup | 154 S1+ | 87 |
| MB 880-18404/8 | Method Blank | 120 | 72 |
| MB 880-18464/5-A | Method Blank | 122 | 101 |
| MB 880-18467/5-A | Method Blank | 128 | 76 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | 1CO1 (70-130) | OTPH1 (70-130) |
| 880-10781-A-22-E MS | Matrix Spike | 71 | 64 S1- |
| 880-10781-A-22-F MSD | Matrix Spike Duplicate | 71 | 64 S1- |
| 880-10893-1 | S-1 0.5' | 80 | 89 |
| 880-10893-1 MS | S-1 0.5' | 91 | 93 |
| 880-10893-1 MSD | S-1 0.5' | 75 | 74 |
| 880-10893-2 | S-1 1' | 70 | 78 |
| 880-10893-3 | S-2 0.5' | 68 S1- | 75 |
| 880-10893-4 | S-2 1' | 78 | 86 |
| 880-10893-5 | S-3 0.5' | 66 S1- | 71 |
| 880-10893-6 | S-3 1' | 65 S1- | 69 S1- |
| 880-10893-7 | S-4 0.5' | 79 | 88 |
| 880-10893-8 | S-5 0.5' | 73 | 81 |
| 880-10893-9 | S-6 0.5' | 70 | 75 |
| 880-10893-10 | S-7 0.5' | 78 | 86 |
| 880-10893-11 | S-8 0.5' | 81 | 87 |
| LCS 880-18410/2-A | Lab Control Sample | 106 | 110 |
| LCS 880-18779/2-A | Lab Control Sample | 76 | 71 |

# Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-10893-1
Project/Site: SD 19 CTB - Waterline SDG: 22-0105-01

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1CO1 | OTPH1 | | | | | | | | |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) | | | | | | | | |
| LCSD 880-18410/3-A | Lab Control Sample Dup | 96 | 101 | | | | | | | | |
| LCSD 880-18779/3-A | Lab Control Sample Dup | 72 | 68 S1- | | | | | | | | |
| MB 880-18410/1-A | Method Blank | 88 | 100 | | | | | | | | |
| MB 880-18779/1-A | Method Blank | 76 | 83 | | | | | | | | |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

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

**Lab Sample ID: MB 880-18404/8**
**Matrix: Solid**
**Analysis Batch: 18404**

**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 | | | 02/03/22 17:23 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | | 02/03/22 17:23 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | | 02/03/22 17:23 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | | 02/03/22 17:23 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | | 02/03/22 17:23 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | | 02/03/22 17:23 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *120* | | *70 - 130* | | *02/03/22 17:23* | *1* |
| *1,4-Difluorobenzene (Surr)* | *72* | | *70 - 130* | | *02/03/22 17:23* | *1* |

**Lab Sample ID: MB 880-18464/5-A**
**Matrix: Solid**
**Analysis Batch: 18466**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 18464**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 00:16 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 00:16 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 00:16 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 00:16 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 00:16 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 09:51 | 02/04/22 00:16 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *122* | | *70 - 130* | *02/03/22 09:51* | *02/04/22 00:16* | *1* |
| *1,4-Difluorobenzene (Surr)* | *101* | | *70 - 130* | *02/03/22 09:51* | *02/04/22 00:16* | *1* |

**Lab Sample ID: LCS 880-18464/1-A**
**Matrix: Solid**
**Analysis Batch: 18466**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 18464**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.07101 | | mg/Kg | | 71 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.07805 | | mg/Kg | | 78 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.08818 | | mg/Kg | | 88 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.1715 | | mg/Kg | | 86 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.08957 | | mg/Kg | | 90 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *117* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *101* | | *70 - 130* |

**Lab Sample ID: LCSD 880-18464/2-A**
**Matrix: Solid**
**Analysis Batch: 18466**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 18464**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.07297 | | mg/Kg | | 73 | 70 - 130 | 3 | 35 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

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

**Lab Sample ID: LCSD 880-18464/2-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 18466** — **Prep Batch: 18464**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | | | 0.100 | 0.07640 | | mg/Kg | | 76 | 70 - 130 | 2 | 35 |
| Ethylbenzene | | | 0.100 | 0.08377 | | mg/Kg | | 84 | 70 - 130 | 5 | 35 |
| m,p-Xylenes | | | 0.200 | 0.1657 | | mg/Kg | | 83 | 70 - 130 | 3 | 35 |
| o-Xylene | | | 0.100 | 0.08049 | | mg/Kg | | 80 | 70 - 130 | 11 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *102* | | *70 - 130* |

**Lab Sample ID: 880-10891-A-22-D MS** — **Client Sample ID: Matrix Spike**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 18466** — **Prep Batch: 18464**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.0990 | 0.07275 | | mg/Kg | | 73 | 70 - 130 |
| Toluene | <0.00200 | U | 0.0990 | 0.07524 | | mg/Kg | | 76 | 70 - 130 |
| Ethylbenzene | <0.00200 | U | 0.0990 | 0.08490 | | mg/Kg | | 86 | 70 - 130 |
| m,p-Xylenes | <0.00401 | U | 0.198 | 0.1616 | | mg/Kg | | 82 | 70 - 130 |
| o-Xylene | <0.00200 | U | 0.0990 | 0.08427 | | mg/Kg | | 85 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *94* | | *70 - 130* |

**Lab Sample ID: 880-10891-A-22-E MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 18466** — **Prep Batch: 18464**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.100 | 0.08263 | | mg/Kg | | 82 | 70 - 130 | 13 | 35 |
| Toluene | <0.00200 | U | 0.100 | 0.09422 | | mg/Kg | | 94 | 70 - 130 | 22 | 35 |
| Ethylbenzene | <0.00200 | U | 0.100 | 0.09487 | | mg/Kg | | 94 | 70 - 130 | 11 | 35 |
| m,p-Xylenes | <0.00401 | U | 0.201 | 0.1886 | | mg/Kg | | 94 | 70 - 130 | 15 | 35 |
| o-Xylene | <0.00200 | U | 0.100 | 0.09185 | | mg/Kg | | 91 | 70 - 130 | 9 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *126* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *101* | | *70 - 130* |

**Lab Sample ID: MB 880-18467/5-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 18404** — **Prep Batch: 18467**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

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

**Lab Sample ID: MB 880-18467/5-A**
**Matrix: Solid**
**Analysis Batch: 18404**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 18467**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *128* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 02:17* | *1* |
| *1,4-Difluorobenzene (Surr)* | *76* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 02:17* | *1* |

**Lab Sample ID: LCS 880-18467/1-A**
**Matrix: Solid**
**Analysis Batch: 18404**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 18467**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.08145 | | mg/Kg | | 81 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.08647 | | mg/Kg | | 86 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.09778 | | mg/Kg | | 98 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.1881 | | mg/Kg | | 94 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1011 | | mg/Kg | | 101 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *180* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *95* | | *70 - 130* |

**Lab Sample ID: LCSD 880-18467/2-A**
**Matrix: Solid**
**Analysis Batch: 18404**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 18467**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.07464 | | mg/Kg | | 75 | 70 - 130 | 9 | 35 |
| Toluene | | | 0.100 | 0.07488 | | mg/Kg | | 75 | 70 - 130 | 14 | 35 |
| Ethylbenzene | | | 0.100 | 0.08497 | | mg/Kg | | 85 | 70 - 130 | 14 | 35 |
| m,p-Xylenes | | | 0.200 | 0.1632 | | mg/Kg | | 82 | 70 - 130 | 14 | 35 |
| o-Xylene | | | 0.100 | 0.08892 | | mg/Kg | | 89 | 70 - 130 | 13 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *154* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *87* | | *70 - 130* |

**Lab Sample ID: 880-10893-4 MS**
**Matrix: Solid**
**Analysis Batch: 18404**

**Client Sample ID: S-2 1'**
**Prep Type: Total/NA**
**Prep Batch: 18467**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U F1 | 0.0996 | 0.05971 | F1 | mg/Kg | | 60 | 70 - 130 | | |
| Toluene | <0.00198 | U F1 | 0.0996 | 0.06053 | F1 | mg/Kg | | 61 | 70 - 130 | | |
| Ethylbenzene | <0.00198 | U F1 | 0.0996 | 0.06883 | F1 | mg/Kg | | 69 | 70 - 130 | | |
| m,p-Xylenes | <0.00397 | U F1 | 0.199 | 0.1299 | F1 | mg/Kg | | 65 | 70 - 130 | | |
| o-Xylene | <0.00198 | U | 0.0996 | 0.07058 | | mg/Kg | | 71 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

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

**Lab Sample ID: 880-10893-4 MS**
**Matrix: Solid**
**Analysis Batch: 18404**

**Client Sample ID: S-2 1'**
**Prep Type: Total/NA**
**Prep Batch: 18467**

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 168 | S1+ | 70 - 130 |
| 1,4-Difluorobenzene (Surr) | 98 | | 70 - 130 |

**Lab Sample ID: 880-10893-4 MSD**
**Matrix: Solid**
**Analysis Batch: 18404**

**Client Sample ID: S-2 1'**
**Prep Type: Total/NA**
**Prep Batch: 18467**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U F1 | 0.0996 | 0.06598 | F1 | mg/Kg | | 66 | 70 - 130 | 10 | 35 |
| Toluene | <0.00198 | U F1 | 0.0996 | 0.06460 | F1 | mg/Kg | | 65 | 70 - 130 | 7 | 35 |
| Ethylbenzene | <0.00198 | U F1 | 0.0996 | 0.07157 | | mg/Kg | | 72 | 70 - 130 | 4 | 35 |
| m,p-Xylenes | <0.00397 | U F1 | 0.199 | 0.1353 | F1 | mg/Kg | | 68 | 70 - 130 | 4 | 35 |
| o-Xylene | <0.00198 | U | 0.0996 | 0.07369 | | mg/Kg | | 74 | 70 - 130 | 4 | 35 |

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

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

**Lab Sample ID: MB 880-18410/1-A**
**Matrix: Solid**
**Analysis Batch: 18623**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 18410**

| 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 | | 02/02/22 15:57 | 02/05/22 23:37 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/05/22 23:37 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/02/22 15:57 | 02/05/22 23:37 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1-Chlorooctane (Surr) | 88 | | 70 - 130 | 02/02/22 15:57 | 02/05/22 23:37 | 1 |
| o-Terphenyl (Surr) | 100 | | 70 - 130 | 02/02/22 15:57 | 02/05/22 23:37 | 1 |

**Lab Sample ID: LCS 880-18410/2-A**
**Matrix: Solid**
**Analysis Batch: 18623**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 18410**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 890.3 | | mg/Kg | | 89 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1301 | | mg/Kg | | 130 | 70 - 130 | | |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 106 | | 70 - 130 |
| o-Terphenyl (Surr) | 110 | | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

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

**Lab Sample ID: LCSD 880-18410/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 18623** — **Prep Batch: 18410**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 888.9 | | mg/Kg | | 89 | 70 - 130 | 0 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1197 | | mg/Kg | | 120 | 70 - 130 | 8 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *96* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *101* | | *70 - 130* |

**Lab Sample ID: 880-10893-1 MS** — **Client Sample ID: S-1 0.5'**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 18623** — **Prep Batch: 18410**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U F2 | 1000 | 1117 | | mg/Kg | | 109 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U F2 | 1000 | 1223 | | mg/Kg | | 120 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *91* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *93* | | *70 - 130* |

**Lab Sample ID: 880-10893-1 MSD** — **Client Sample ID: S-1 0.5'**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 18623** — **Prep Batch: 18410**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U F2 | 998 | 876.7 | F2 | mg/Kg | | 85 | 70 - 130 | 24 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U F2 | 998 | 970.8 | F2 | mg/Kg | | 95 | 70 - 130 | 23 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *75* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *74* | | *70 - 130* |

**Lab Sample ID: MB 880-18779/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 18806** — **Prep Batch: 18779**

| 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 | | 02/07/22 17:05 | 02/08/22 13:37 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/07/22 17:05 | 02/08/22 13:37 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/07/22 17:05 | 02/08/22 13:37 | 1 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

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

**Lab Sample ID: MB 880-18779/1-A**
**Matrix: Solid**
**Analysis Batch: 18806**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 18779**

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1-Chlorooctane (Surr) | 76 | | 70 - 130 | 02/07/22 17:05 | 02/08/22 13:37 | 1 |
| o-Terphenyl (Surr) | 83 | | 70 - 130 | 02/07/22 17:05 | 02/08/22 13:37 | 1 |

**Lab Sample ID: LCS 880-18779/2-A**
**Matrix: Solid**
**Analysis Batch: 18806**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 18779**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 866.4 | | mg/Kg | | 87 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 879.4 | | mg/Kg | | 88 | 70 - 130 | | |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 76 | | 70 - 130 |
| o-Terphenyl (Surr) | 71 | | 70 - 130 |

**Lab Sample ID: LCSD 880-18779/3-A**
**Matrix: Solid**
**Analysis Batch: 18806**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 18779**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 826.6 | | mg/Kg | | 83 | 70 - 130 | 5 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 853.7 | | mg/Kg | | 85 | 70 - 130 | 3 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 72 | | 70 - 130 |
| o-Terphenyl (Surr) | 68 | S1- | 70 - 130 |

**Lab Sample ID: 880-10781-A-22-E MS**
**Matrix: Solid**
**Analysis Batch: 18806**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 18779**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 1000 | 865.2 | | mg/Kg | | 87 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | 52.3 | | 1000 | 817.4 | | mg/Kg | | 77 | 70 - 130 | | |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 71 | | 70 - 130 |
| o-Terphenyl (Surr) | 64 | S1- | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

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

**Lab Sample ID: 880-10781-A-22-F MSD**
**Matrix: Solid**
**Analysis Batch: 18806**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 18779**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 998 | 868.9 | | mg/Kg | | 87 | 70 - 130 | 0 | 20 |
| Diesel Range Organics (Over C10-C28) | 52.3 | | 998 | 821.6 | | mg/Kg | | 77 | 70 - 130 | 1 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *71* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *64* | *S1-* | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-18572/1-A**
**Matrix: Solid**
**Analysis Batch: 18733**

**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 | | | 02/09/22 21:53 | 1 |

**Lab Sample ID: LCS 880-18572/2-A**
**Matrix: Solid**
**Analysis Batch: 18733**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 253.8 | | mg/Kg | | 102 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-18572/3-A**
**Matrix: Solid**
**Analysis Batch: 18733**

**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 | 251.1 | | mg/Kg | | 100 | 90 - 110 | 1 | 20 |

**Lab Sample ID: 880-10893-1 MS**
**Matrix: Solid**
**Analysis Batch: 18733**

**Client Sample ID: S-1 0.5'**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 30.4 | F1 | 248 | 218.1 | F1 | mg/Kg | | 76 | 90 - 110 | | |

**Lab Sample ID: 880-10893-1 MSD**
**Matrix: Solid**
**Analysis Batch: 18733**

**Client Sample ID: S-1 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 | 30.4 | F1 | 248 | 257.9 | | mg/Kg | | 92 | 90 - 110 | 17 | 20 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 880-10893-11 MS**
**Matrix: Solid**
**Analysis Batch: 18733**

**Client Sample ID: S-8 0.5'**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 278 | F1 | 250 | 501.8 | F1 | mg/Kg | | 89 | 90 - 110 | | |

**Lab Sample ID: 880-10893-11 MSD**
**Matrix: Solid**
**Analysis Batch: 18733**

**Client Sample ID: S-8 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 | 278 | F1 | 250 | 508.2 | | mg/Kg | | 92 | 90 - 110 | 1 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## GC VOA

### Analysis Batch: 18404

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-4 | S-2 1' | Total/NA | Solid | 8021B | 18467 |
| 880-10893-5 | S-3 0.5' | Total/NA | Solid | 8021B | 18467 |
| 880-10893-6 | S-3 1' | Total/NA | Solid | 8021B | 18467 |
| 880-10893-7 | S-4 0.5' | Total/NA | Solid | 8021B | 18467 |
| 880-10893-8 | S-5 0.5' | Total/NA | Solid | 8021B | 18467 |
| 880-10893-9 | S-6 0.5' | Total/NA | Solid | 8021B | 18467 |
| 880-10893-10 | S-7 0.5' | Total/NA | Solid | 8021B | 18467 |
| 880-10893-11 | S-8 0.5' | Total/NA | Solid | 8021B | 18467 |
| MB 880-18404/8 | Method Blank | Total/NA | Solid | 8021B | |
| MB 880-18467/5-A | Method Blank | Total/NA | Solid | 8021B | 18467 |
| LCS 880-18467/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 18467 |
| LCSD 880-18467/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 18467 |
| 880-10893-4 MS | S-2 1' | Total/NA | Solid | 8021B | 18467 |
| 880-10893-4 MSD | S-2 1' | Total/NA | Solid | 8021B | 18467 |

### Prep Batch: 18464

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-1 | S-1 0.5' | Total/NA | Solid | 5035 | |
| 880-10893-2 | S-1 1' | Total/NA | Solid | 5035 | |
| 880-10893-3 | S-2 0.5' | Total/NA | Solid | 5035 | |
| MB 880-18464/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-18464/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-18464/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-10891-A-22-D MS | Matrix Spike | Total/NA | Solid | 5035 | |
| 880-10891-A-22-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 5035 | |

### Analysis Batch: 18466

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-1 | S-1 0.5' | Total/NA | Solid | 8021B | 18464 |
| 880-10893-2 | S-1 1' | Total/NA | Solid | 8021B | 18464 |
| 880-10893-3 | S-2 0.5' | Total/NA | Solid | 8021B | 18464 |
| MB 880-18464/5-A | Method Blank | Total/NA | Solid | 8021B | 18464 |
| LCS 880-18464/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 18464 |
| LCSD 880-18464/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 18464 |
| 880-10891-A-22-D MS | Matrix Spike | Total/NA | Solid | 8021B | 18464 |
| 880-10891-A-22-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 8021B | 18464 |

### Prep Batch: 18467

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-4 | S-2 1' | Total/NA | Solid | 5035 | |
| 880-10893-5 | S-3 0.5' | Total/NA | Solid | 5035 | |
| 880-10893-6 | S-3 1' | Total/NA | Solid | 5035 | |
| 880-10893-7 | S-4 0.5' | Total/NA | Solid | 5035 | |
| 880-10893-8 | S-5 0.5' | Total/NA | Solid | 5035 | |
| 880-10893-9 | S-6 0.5' | Total/NA | Solid | 5035 | |
| 880-10893-10 | S-7 0.5' | Total/NA | Solid | 5035 | |
| 880-10893-11 | S-8 0.5' | Total/NA | Solid | 5035 | |
| MB 880-18467/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-18467/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-18467/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-10893-4 MS | S-2 1' | Total/NA | Solid | 5035 | |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## GC VOA (Continued)

### Prep Batch: 18467 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-4 MSD | S-2 1' | Total/NA | Solid | 5035 | |

### Analysis Batch: 18618

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-4 | S-2 1' | Total/NA | Solid | Total BTEX | |

### Analysis Batch: 18770

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-1 | S-1 0.5' | Total/NA | Solid | Total BTEX | |
| 880-10893-2 | S-1 1' | Total/NA | Solid | Total BTEX | |
| 880-10893-3 | S-2 0.5' | Total/NA | Solid | Total BTEX | |
| 880-10893-5 | S-3 0.5' | Total/NA | Solid | Total BTEX | |
| 880-10893-6 | S-3 1' | Total/NA | Solid | Total BTEX | |
| 880-10893-7 | S-4 0.5' | Total/NA | Solid | Total BTEX | |
| 880-10893-8 | S-5 0.5' | Total/NA | Solid | Total BTEX | |
| 880-10893-9 | S-6 0.5' | Total/NA | Solid | Total BTEX | |
| 880-10893-10 | S-7 0.5' | Total/NA | Solid | Total BTEX | |
| 880-10893-11 | S-8 0.5' | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Prep Batch: 18410

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-1 | S-1 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10893-2 | S-1 1' | Total/NA | Solid | 8015NM Prep | |
| 880-10893-3 | S-2 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10893-4 | S-2 1' | Total/NA | Solid | 8015NM Prep | |
| 880-10893-7 | S-4 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10893-8 | S-5 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10893-10 | S-7 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10893-11 | S-8 0.5' | Total/NA | Solid | 8015NM Prep | |
| MB 880-18410/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-18410/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-18410/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-10893-1 MS | S-1 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10893-1 MSD | S-1 0.5' | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 18623

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-1 | S-1 0.5' | Total/NA | Solid | 8015B NM | 18410 |
| 880-10893-2 | S-1 1' | Total/NA | Solid | 8015B NM | 18410 |
| 880-10893-3 | S-2 0.5' | Total/NA | Solid | 8015B NM | 18410 |
| 880-10893-4 | S-2 1' | Total/NA | Solid | 8015B NM | 18410 |
| 880-10893-7 | S-4 0.5' | Total/NA | Solid | 8015B NM | 18410 |
| 880-10893-8 | S-5 0.5' | Total/NA | Solid | 8015B NM | 18410 |
| 880-10893-10 | S-7 0.5' | Total/NA | Solid | 8015B NM | 18410 |
| 880-10893-11 | S-8 0.5' | Total/NA | Solid | 8015B NM | 18410 |
| MB 880-18410/1-A | Method Blank | Total/NA | Solid | 8015B NM | 18410 |
| LCS 880-18410/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 18410 |
| LCSD 880-18410/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 18410 |
| 880-10893-1 MS | S-1 0.5' | Total/NA | Solid | 8015B NM | 18410 |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-10893-1
Project/Site: SD 19 CTB - Waterline SDG: 22-0105-01

## GC Semi VOA (Continued)

### Analysis Batch: 18623 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-1 MSD | S-1 0.5' | Total/NA | Solid | 8015B NM | 18410 |

### Prep Batch: 18779

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-5 | S-3 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10893-6 | S-3 1' | Total/NA | Solid | 8015NM Prep | |
| 880-10893-9 | S-6 0.5' | Total/NA | Solid | 8015NM Prep | |
| MB 880-18779/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-18779/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-18779/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-10781-A-22-E MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-10781-A-22-F MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 18806

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-5 | S-3 0.5' | Total/NA | Solid | 8015B NM | 18779 |
| 880-10893-6 | S-3 1' | Total/NA | Solid | 8015B NM | 18779 |
| 880-10893-9 | S-6 0.5' | Total/NA | Solid | 8015B NM | 18779 |
| MB 880-18779/1-A | Method Blank | Total/NA | Solid | 8015B NM | 18779 |
| LCS 880-18779/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 18779 |
| LCSD 880-18779/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 18779 |
| 880-10781-A-22-E MS | Matrix Spike | Total/NA | Solid | 8015B NM | 18779 |
| 880-10781-A-22-F MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 18779 |

### Analysis Batch: 18870

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-1 | S-1 0.5' | Total/NA | Solid | 8015 NM | |
| 880-10893-2 | S-1 1' | Total/NA | Solid | 8015 NM | |
| 880-10893-3 | S-2 0.5' | Total/NA | Solid | 8015 NM | |
| 880-10893-4 | S-2 1' | Total/NA | Solid | 8015 NM | |
| 880-10893-5 | S-3 0.5' | Total/NA | Solid | 8015 NM | |
| 880-10893-6 | S-3 1' | Total/NA | Solid | 8015 NM | |
| 880-10893-7 | S-4 0.5' | Total/NA | Solid | 8015 NM | |
| 880-10893-8 | S-5 0.5' | Total/NA | Solid | 8015 NM | |
| 880-10893-9 | S-6 0.5' | Total/NA | Solid | 8015 NM | |
| 880-10893-10 | S-7 0.5' | Total/NA | Solid | 8015 NM | |
| 880-10893-11 | S-8 0.5' | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 18572

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-1 | S-1 0.5' | Soluble | Solid | DI Leach | |
| 880-10893-2 | S-1 1' | Soluble | Solid | DI Leach | |
| 880-10893-3 | S-2 0.5' | Soluble | Solid | DI Leach | |
| 880-10893-4 | S-2 1' | Soluble | Solid | DI Leach | |
| 880-10893-5 | S-3 0.5' | Soluble | Solid | DI Leach | |
| 880-10893-6 | S-3 1' | Soluble | Solid | DI Leach | |
| 880-10893-7 | S-4 0.5' | Soluble | Solid | DI Leach | |
| 880-10893-8 | S-5 0.5' | Soluble | Solid | DI Leach | |
| 880-10893-9 | S-6 0.5' | Soluble | Solid | DI Leach | |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## HPLC/IC (Continued)

### Leach Batch: 18572 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-10 | S-7 0.5' | Soluble | Solid | DI Leach | |
| 880-10893-11 | S-8 0.5' | Soluble | Solid | DI Leach | |
| MB 880-18572/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-18572/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-18572/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-10893-1 MS | S-1 0.5' | Soluble | Solid | DI Leach | |
| 880-10893-1 MSD | S-1 0.5' | Soluble | Solid | DI Leach | |
| 880-10893-11 MS | S-8 0.5' | Soluble | Solid | DI Leach | |
| 880-10893-11 MSD | S-8 0.5' | Soluble | Solid | DI Leach | |

### Analysis Batch: 18733

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10893-1 | S-1 0.5' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-2 | S-1 1' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-3 | S-2 0.5' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-4 | S-2 1' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-5 | S-3 0.5' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-6 | S-3 1' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-7 | S-4 0.5' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-8 | S-5 0.5' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-9 | S-6 0.5' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-10 | S-7 0.5' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-11 | S-8 0.5' | Soluble | Solid | 300.0 | 18572 |
| MB 880-18572/1-A | Method Blank | Soluble | Solid | 300.0 | 18572 |
| LCS 880-18572/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 18572 |
| LCSD 880-18572/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 18572 |
| 880-10893-1 MS | S-1 0.5' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-1 MSD | S-1 0.5' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-11 MS | S-8 0.5' | Soluble | Solid | 300.0 | 18572 |
| 880-10893-11 MSD | S-8 0.5' | Soluble | Solid | 300.0 | 18572 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-1 0.5'

**Date Collected: 02/01/22 13:20**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10893-1**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 18464 | 02/03/22 09:51 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18466 | 02/04/22 08:02 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18770 | 02/07/22 15:39 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18410 | 02/02/22 15:57 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18623 | 02/06/22 00:37 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 22:08 | CH | XEN MID |

## Client Sample ID: S-1 1'

**Date Collected: 02/01/22 13:21**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10893-2**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 18464 | 02/03/22 09:51 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18466 | 02/04/22 08:22 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18770 | 02/07/22 15:39 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 18410 | 02/02/22 15:57 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18623 | 02/06/22 01:39 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 22:23 | CH | XEN MID |

## Client Sample ID: S-2 0.5'

**Date Collected: 02/01/22 13:22**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10893-3**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 18464 | 02/03/22 09:51 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18466 | 02/04/22 08:43 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18770 | 02/07/22 15:39 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18410 | 02/02/22 15:57 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18623 | 02/06/22 02:00 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 22:27 | CH | XEN MID |

## Client Sample ID: S-2 1'

**Date Collected: 02/01/22 13:23**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10893-4**
**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 | | | 5.04 g | 5 mL | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 02:43 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18618 | 02/04/22 16:59 | MR | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-2 1'

**Lab Sample ID: 880-10893-4**
**Matrix: Solid**
**Date Collected: 02/01/22 13:23**
**Date Received: 02/02/22 11:10**

| 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 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 18410 | 02/02/22 15:57 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18623 | 02/06/22 02:21 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 22:32 | CH | XEN MID |

## Client Sample ID: S-3 0.5'

**Lab Sample ID: 880-10893-5**
**Matrix: Solid**
**Date Collected: 02/01/22 13:24**
**Date Received: 02/02/22 11:10**

| 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 | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 03:10 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18770 | 02/07/22 15:39 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18779 | 02/07/22 17:05 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18806 | 02/08/22 15:47 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 22:37 | CH | XEN MID |

## Client Sample ID: S-3 1'

**Lab Sample ID: 880-10893-6**
**Matrix: Solid**
**Date Collected: 02/01/22 13:25**
**Date Received: 02/02/22 11:10**

| 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 | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 03:37 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18770 | 02/07/22 15:39 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 18779 | 02/07/22 17:05 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18806 | 02/08/22 16:08 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 22:52 | CH | XEN MID |

## Client Sample ID: S-4 0.5'

**Lab Sample ID: 880-10893-7**
**Matrix: Solid**
**Date Collected: 02/01/22 13:26**
**Date Received: 02/02/22 11:10**

| 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 | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 04:03 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18770 | 02/07/22 15:39 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18410 | 02/02/22 15:57 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18623 | 02/06/22 03:22 | AJ | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-4 0.5'

**Date Collected: 02/01/22 13:26**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10893-7**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 4.95 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 22:57 | CH | XEN MID |

## Client Sample ID: S-5 0.5'

**Date Collected: 02/01/22 13:28**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10893-8**
**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 | | | 5.01 g | 5 mL | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 04:31 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18770 | 02/07/22 15:39 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 18410 | 02/02/22 15:57 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18623 | 02/06/22 03:42 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 23:01 | CH | XEN MID |

## Client Sample ID: S-6 0.5'

**Date Collected: 02/01/22 13:30**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10893-9**
**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 | | | 4.96 g | 5 mL | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 04:58 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18770 | 02/07/22 15:39 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18779 | 02/07/22 17:05 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18806 | 02/08/22 16:30 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 23:06 | CH | XEN MID |

## Client Sample ID: S-7 0.5'

**Date Collected: 02/01/22 13:32**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10893-10**
**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 | | | 5.03 g | 5 mL | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 05:25 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18770 | 02/07/22 15:39 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 18410 | 02/02/22 15:57 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18623 | 02/06/22 04:23 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 23:11 | CH | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

## Client Sample ID: S-8 0.5'

**Date Collected: 02/01/22 13:34**
**Date Received: 02/02/22 11:10**

## Lab Sample ID: 880-10893-11

**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 | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 05:53 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18770 | 02/07/22 15:39 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18410 | 02/02/22 15:57 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18623 | 02/06/22 05:04 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 23:16 | 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. Job ID: 880-10893-1
Project/Site: SD 19 CTB - Waterline SDG: 22-0105-01

## 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: 880-10893-1
Project/Site: SD 19 CTB - Waterline SDG: 22-0105-01

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

**Protocol References:**

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Waterline

Job ID: 880-10893-1
SDG: 22-0105-01

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-10893-1 | S-1 0.5' | Solid | 02/01/22 13:20 | 02/02/22 11:10 |
| 880-10893-2 | S-1 1' | Solid | 02/01/22 13:21 | 02/02/22 11:10 |
| 880-10893-3 | S-2 0.5' | Solid | 02/01/22 13:22 | 02/02/22 11:10 |
| 880-10893-4 | S-2 1' | Solid | 02/01/22 13:23 | 02/02/22 11:10 |
| 880-10893-5 | S-3 0.5' | Solid | 02/01/22 13:24 | 02/02/22 11:10 |
| 880-10893-6 | S-3 1' | Solid | 02/01/22 13:25 | 02/02/22 11:10 |
| 880-10893-7 | S-4 0.5' | Solid | 02/01/22 13:26 | 02/02/22 11:10 |
| 880-10893-8 | S-5 0.5' | Solid | 02/01/22 13:28 | 02/02/22 11:10 |
| 880-10893-9 | S-6 0.5' | Solid | 02/01/22 13:30 | 02/02/22 11:10 |
| 880-10893-10 | S-7 0.5' | Solid | 02/01/22 13:32 | 02/02/22 11:10 |
| 880-10893-11 | S-8 0.5' | Solid | 02/01/22 13:34 | 02/02/22 11:10 |

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No. 2448

10893

# CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 2/2/2022 PAGE 1 OF 1

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: SD 19 CTB - WATERLINE

LAI PROJECT #: 22-0105-01 COLLECTOR: DSG/RN

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST/NM

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl, $HNO_3$, $H_2SO_4$ ☐ NaOH ☐, ICE, UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ | CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

| Field Sample I.D. | Lab # | Date | Time | Matrix | # of Containers | HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | ANALYSES | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-1 0.5' | | 2/1/22 | 1320 | S | 1 | | | | X | | X | |
| S-1 1' | | | 1321 | | | | | | | | | |
| S-2 0.5' | | | 1322 | | | | | | | | | |
| S-2 1' | | | 1323 | | | | | | | | | |
| S-3 0.5' | | | 1324 | | | | | | | | | |
| S-3 1' | | | 1325 | | | | | | | | | |
| S-4 0.5' | | | 1326 | | | | | | | | | |
| S-5 0.5' | | | 1328 | | | | | | | | | |
| S-6 0.5' | | | 1330 | | | | | | | | | |
| S-7 0.5' | | | 1332 | | | | | | | | | |
| S-8 0.5' | | | 1334 | | | | | | | | | |

TOTAL 11

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

[signature] 2/2/2022 1110 [signature] 2/2/22

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

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

LABORATORY: XENCO

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

LABORATORY USE ONLY:
RECEIVING TEMP: -8.9/-8.9 THERM#: IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

880-10893 Chain of Custody

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2/10/2022

Received by OCD: 8/23/2023 10:40:52 AM

Released to Imaging: 12/5/2023 1:12:27 PM

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-10893-1
SDG Number: 22-0105-01

**Login Number: 10893**
**List Number: 1**
**Creator: Kramer, Jessica**

**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. | 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 | |

eurofins | Environment Testing America

# ANALYTICAL REPORT

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

Laboratory Job ID: 880-12309-1
Laboratory Sample Delivery Group: 22-0105-01
Client Project/Site: SD 19 CTB Water Line

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

Attn: Mr. Mark J Larson

Holly Taylor

*Authorized for release by:*
*3/25/2022 11:50:40 AM*

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

LINKS

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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: SD 19 CTB Water Line

Laboratory Job ID: 880-12309-1
SDG: 22-0105-01

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# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-12309-1
Project/Site: SD 19 CTB Water Line SDG: 22-0105-01

## Qualifiers

### GC VOA

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| E | Result exceeded calibration range. |
| 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. |

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| *1 | LCS/LCSD RPD exceeds control limits. |
| F1 | MS and/or MSD recovery exceeds control limits. |
| S1- | Surrogate recovery exceeds control limits, low biased. |
| S1+ | Surrogate recovery exceeds control limits, high biased. |
| U | Indicates the analyte was analyzed for but not detected. |

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

## Job ID: 880-12309-1

### Laboratory: Eurofins Midland

**Narrative**

**Job Narrative**
**880-12309-1**

**Receipt**
The samples were received on 3/10/2022 3:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.1°C

**GC VOA**
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-21733 and analytical batch 880-21907 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 native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with preparation batch 880-21732 and analytical batch 880-21846 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Toluene, Ethylbenzene, m,p-Xylenes, o-Xylene and Xylenes, Total in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-21371 and analytical batch 880-21357 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 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-21371/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_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 8015MOD_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.

**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: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

## Client Sample ID: S-3,1

**Date Collected: 03/09/22 08:50**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12309-1

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U F1 | 0.00200 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:05 | 1 |
| Toluene | <0.00200 | U F1 | 0.00200 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:05 | 1 |
| Ethylbenzene | <0.00200 | U F1 | 0.00200 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:05 | 1 |
| m,p-Xylenes | <0.00399 | U F1 | 0.00399 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:05 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:05 | 1 |
| Xylenes, Total | <0.00399 | U F1 | 0.00399 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *92* | | *70 - 130* | *03/17/22 13:09* | *03/18/22 21:05* | *1* |
| *1,4-Difluorobenzene (Surr)* | *112* | | *70 - 130* | *03/17/22 13:09* | *03/18/22 21:05* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 03/18/22 17:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U F1 | 49.8 | | mg/Kg | | 03/11/22 09:52 | 03/12/22 06:13 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U F1 | 49.8 | | mg/Kg | | 03/11/22 09:52 | 03/12/22 06:13 | 1 |
| Oil Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 03/11/22 09:52 | 03/12/22 06:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *123* | | *70 - 130* | *03/11/22 09:52* | *03/12/22 06:13* | *1* |
| *o-Terphenyl (Surr)* | *124* | | *70 - 130* | *03/11/22 09:52* | *03/12/22 06:13* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **11.9** | | 4.99 | | mg/Kg | | | 03/24/22 20:34 | 1 |

## Client Sample ID: S-3,3

**Date Collected: 03/09/22 08:51**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12309-2

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:26 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:26 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:26 | 1 |
| m,p-Xylenes | <0.00397 | U | 0.00397 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:26 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:26 | 1 |
| Xylenes, Total | <0.00397 | U | 0.00397 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | *03/17/22 13:09* | *03/18/22 21:26* | *1* |
| *1,4-Difluorobenzene (Surr)* | *119* | | *70 - 130* | *03/17/22 13:09* | *03/18/22 21:26* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

## Client Sample ID: S-3,3

**Date Collected: 03/09/22 08:51**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12309-2

**Matrix: Solid**

### 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 | | | 03/18/22 17:18 | 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 08:40 | 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 | | 03/11/22 10:00 | 03/11/22 20:05 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U *1 | 50.0 | | mg/Kg | | 03/11/22 10:00 | 03/11/22 20:05 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/11/22 10:00 | 03/11/22 20:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *94* | | *70 - 130* | *03/11/22 10:00* | *03/11/22 20:05* | *1* |
| *o-Terphenyl (Surr)* | *105* | | *70 - 130* | *03/11/22 10:00* | *03/11/22 20:05* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <4.98 | U | 4.98 | | mg/Kg | | | 03/24/22 21:00 | 1 |

## Client Sample ID: S-3,5

**Date Collected: 03/09/22 08:52**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12309-3

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:47 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:47 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:47 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:47 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:47 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 03/17/22 13:09 | 03/18/22 21:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | *03/17/22 13:09* | *03/18/22 21:47* | *1* |
| *1,4-Difluorobenzene (Surr)* | *114* | | *70 - 130* | *03/17/22 13:09* | *03/18/22 21:47* | *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 | | | 03/18/22 17:18 | 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 08:40 | 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 | | 03/11/22 10:00 | 03/11/22 20:26 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U *1 | 49.8 | | mg/Kg | | 03/11/22 10:00 | 03/11/22 20:26 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-12309-1
Project/Site: SD 19 CTB Water Line SDG: 22-0105-01

## Client Sample ID: S-3,5 Lab Sample ID: 880-12309-3
**Date Collected: 03/09/22 08:52** **Matrix: Solid**
**Date Received: 03/10/22 15:05**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oll Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 03/11/22 10:00 | 03/11/22 20:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *92* | | *70 - 130* | *03/11/22 10:00* | *03/11/22 20:26* | *1* |
| *o-Terphenyl (Surr)* | *101* | | *70 - 130* | *03/11/22 10:00* | *03/11/22 20:26* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 03/24/22 21:09 | 1 |

## Client Sample ID: S-3,10 Lab Sample ID: 880-12309-4
**Date Collected: 03/09/22 08:53** **Matrix: Solid**
**Date Received: 03/10/22 15:05**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 16:48 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 16:48 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 16:48 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 16:48 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 16:48 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 16:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 16:48* | *1* |
| *1,4-Difluorobenzene (Surr)* | *109* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 16:48* | *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 | | | 03/18/22 17:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:36 | 03/15/22 17:30 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:36 | 03/15/22 17:30 | 1 |
| Oll Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:36 | 03/15/22 17:30 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *93* | | *70 - 130* | *03/14/22 08:36* | *03/15/22 17:30* | *1* |
| *o-Terphenyl (Surr)* | *95* | | *70 - 130* | *03/14/22 08:36* | *03/15/22 17:30* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **5.51** | | 4.95 | | mg/Kg | | | 03/24/22 21:18 | 1 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

## 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) |
| 880-12309-1 | S-3,1 | 92 | 112 |
| 880-12309-1 MS | S-3,1 | 96 | 93 |
| 880-12309-1 MSD | S-3,1 | 105 | 94 |
| 880-12309-2 | S-3,3 | 104 | 119 |
| 880-12309-3 | S-3,5 | 97 | 114 |
| 880-12309-4 | S-3,10 | 105 | 109 |
| 880-12543-A-2-A MS | Matrix Spike | 306 S1+ | 101 |
| 880-12543-A-2-B MSD | Matrix Spike Duplicate | 252 S1+ | 107 |
| LCS 880-21732/1-A | Lab Control Sample | 101 | 110 |
| LCS 880-21733/1-A | Lab Control Sample | 97 | 105 |
| LCSD 880-21732/2-A | Lab Control Sample Dup | 102 | 110 |
| LCSD 880-21733/2-A | Lab Control Sample Dup | 100 | 98 |
| MB 880-21732/5-A | Method Blank | 101 | 104 |
| MB 880-21733/5-A | Method Blank | 103 | 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) |
| 880-12079-A-1-F MS | Matrix Spike | 45 S1- | 8 S1- |
| 880-12079-A-1-G MSD | Matrix Spike Duplicate | 50 S1- | 9 S1- |
| 880-12309-1 | S-3,1 | 123 | 124 |
| 880-12309-1 MS | S-3,1 | 106 | 91 |
| 880-12309-1 MSD | S-3,1 | 103 | 89 |
| 880-12309-2 | S-3,3 | 94 | 105 |
| 880-12309-3 | S-3,5 | 92 | 101 |
| 880-12309-4 | S-3,10 | 93 | 95 |
| 880-12311-A-1-B MS | Matrix Spike | 103 | 96 |
| 880-12311-A-1-C MSD | Matrix Spike Duplicate | 106 | 96 |
| LCS 880-21371/2-A | Lab Control Sample | 110 | 97 |
| LCS 880-21467/2-A | Lab Control Sample | 97 | 105 |
| LCSD 880-21371/3-A | Lab Control Sample Dup | 132 S1+ | 120 |
| LCSD 880-21467/3-A | Lab Control Sample Dup | 104 | 110 |
| MB 880-21371/1-A | Method Blank | 125 | 126 |
| MB 880-21467/1-A | Method Blank | 107 | 117 |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

# Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-12309-1
Project/Site: SD 19 CTB Water Line SDG: 22-0105-01

## 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)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

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

### Lab Sample ID: MB 880-21732/5-A
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 21732**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 10:33* | *1* |
| *1,4-Difluorobenzene (Surr)* | *104* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 10:33* | *1* |

### Lab Sample ID: LCS 880-21732/1-A
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21732**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09946 | | mg/Kg | | 99 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.09811 | | mg/Kg | | 98 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.09914 | | mg/Kg | | 99 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.2039 | | mg/Kg | | 102 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1001 | | mg/Kg | | 100 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *110* | | *70 - 130* |

### Lab Sample ID: LCSD 880-21732/2-A
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 21732**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09832 | | mg/Kg | | 98 | 70 - 130 | 1 | 35 |
| Toluene | | | 0.100 | 0.09691 | | mg/Kg | | 97 | 70 - 130 | 1 | 35 |
| Ethylbenzene | | | 0.100 | 0.09797 | | mg/Kg | | 98 | 70 - 130 | 1 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2022 | | mg/Kg | | 101 | 70 - 130 | 1 | 35 |
| o-Xylene | | | 0.100 | 0.09968 | | mg/Kg | | 100 | 70 - 130 | 0 | 35 |

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

### Lab Sample ID: 880-12543-A-2-A MS
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 21732**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.00630 | | 0.0990 | 0.08332 | | mg/Kg | | 78 | 70 - 130 | | |
| Toluene | 0.341 | F1 | 0.0990 | 0.8502 | E F1 | mg/Kg | | 514 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

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

**Lab Sample ID: 880-12543-A-2-A MS**
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 21732**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 0.148 | F1 | 0.0990 | 0.3497 | F1 | mg/Kg | | 204 | 70 - 130 |
| m,p-Xylenes | 1.52 | E | 0.198 | 2.444 | E 4 | mg/Kg | | 469 | 70 - 130 |
| o-Xylene | 0.383 | F1 | 0.0990 | 0.7030 | E F1 | mg/Kg | | 323 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *306* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *101* | | *70 - 130* |

**Lab Sample ID: 880-12543-A-2-B MSD**
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 21732**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.00630 | | 0.100 | 0.09134 | | mg/Kg | | 85 | 70 - 130 | 9 | 35 |
| Toluene | 0.341 | F1 | 0.100 | 1.085 | E F1 | mg/Kg | | 742 | 70 - 130 | 24 | 35 |
| Ethylbenzene | 0.148 | F1 | 0.100 | 0.4097 | E F1 | mg/Kg | | 262 | 70 - 130 | 16 | 35 |
| m,p-Xylenes | 1.52 | E | 0.200 | 3.003 | E 4 | mg/Kg | | 742 | 70 - 130 | 21 | 35 |
| o-Xylene | 0.383 | F1 | 0.100 | 0.8516 | E F1 | mg/Kg | | 468 | 70 - 130 | 19 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *252* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *107* | | *70 - 130* |

**Lab Sample ID: MB 880-21733/5-A**
**Matrix: Solid**
**Analysis Batch: 21907**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 21733**

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | mg/Kg | | 03/17/22 13:09 | 03/18/22 20:43 | 1 |
| Toluene | <0.00200 | U | 0.00200 | mg/Kg | | 03/17/22 13:09 | 03/18/22 20:43 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | mg/Kg | | 03/17/22 13:09 | 03/18/22 20:43 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | mg/Kg | | 03/17/22 13:09 | 03/18/22 20:43 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | mg/Kg | | 03/17/22 13:09 | 03/18/22 20:43 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | mg/Kg | | 03/17/22 13:09 | 03/18/22 20:43 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* | *03/17/22 13:09* | *03/18/22 20:43* | *1* |
| *1,4-Difluorobenzene (Surr)* | *103* | | *70 - 130* | *03/17/22 13:09* | *03/18/22 20:43* | *1* |

**Lab Sample ID: LCS 880-21733/1-A**
**Matrix: Solid**
**Analysis Batch: 21907**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21733**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 0.100 | 0.09847 | | mg/Kg | | 98 | 70 - 130 |
| Toluene | 0.100 | 0.09238 | | mg/Kg | | 92 | 70 - 130 |
| Ethylbenzene | 0.100 | 0.09551 | | mg/Kg | | 96 | 70 - 130 |
| m,p-Xylenes | 0.200 | 0.1977 | | mg/Kg | | 99 | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

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

### Lab Sample ID: LCS 880-21733/1-A
**Matrix: Solid**
**Analysis Batch: 21907**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21733**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | | | 0.100 | 0.09676 | | mg/Kg | | 97 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *105* | | *70 - 130* |

### Lab Sample ID: LCSD 880-21733/2-A
**Matrix: Solid**
**Analysis Batch: 21907**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 21733**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.08554 | | mg/Kg | | 86 | 70 - 130 | 14 | 35 |
| Toluene | | | 0.100 | 0.09210 | | mg/Kg | | 92 | 70 - 130 | 0 | 35 |
| Ethylbenzene | | | 0.100 | 0.09813 | | mg/Kg | | 98 | 70 - 130 | 3 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2075 | | mg/Kg | | 104 | 70 - 130 | 5 | 35 |
| o-Xylene | | | 0.100 | 0.1022 | | mg/Kg | | 102 | 70 - 130 | 6 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *98* | | *70 - 130* |

### Lab Sample ID: 880-12309-1 MS
**Matrix: Solid**
**Analysis Batch: 21907**

**Client Sample ID: S-3,1**
**Prep Type: Total/NA**
**Prep Batch: 21733**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U F1 | 0.100 | 0.06063 | F1 | mg/Kg | | 61 | 70 - 130 | | |
| Toluene | <0.00200 | U F1 | 0.100 | 0.06296 | F1 | mg/Kg | | 63 | 70 - 130 | | |
| Ethylbenzene | <0.00200 | U F1 | 0.100 | 0.06414 | F1 | mg/Kg | | 64 | 70 - 130 | | |
| m,p-Xylenes | <0.00399 | U F1 | 0.200 | 0.1365 | F1 | mg/Kg | | 68 | 70 - 130 | | |
| o-Xylene | <0.00200 | U | 0.100 | 0.06952 | | mg/Kg | | 70 | 70 - 130 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *93* | | *70 - 130* |

### Lab Sample ID: 880-12309-1 MSD
**Matrix: Solid**
**Analysis Batch: 21907**

**Client Sample ID: S-3,1**
**Prep Type: Total/NA**
**Prep Batch: 21733**

| 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 | 0.06647 | F1 | mg/Kg | | 67 | 70 - 130 | 9 | 35 |
| Toluene | <0.00200 | U F1 | 0.0998 | 0.06842 | F1 | mg/Kg | | 69 | 70 - 130 | 8 | 35 |
| Ethylbenzene | <0.00200 | U F1 | 0.0998 | 0.06932 | F1 | mg/Kg | | 69 | 70 - 130 | 8 | 35 |
| m,p-Xylenes | <0.00399 | U F1 | 0.200 | 0.1472 | | mg/Kg | | 74 | 70 - 130 | 8 | 35 |
| o-Xylene | <0.00200 | U | 0.0998 | 0.07573 | | mg/Kg | | 76 | 70 - 130 | 9 | 35 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

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

**Lab Sample ID: 880-12309-1 MSD**
**Matrix: Solid**
**Analysis Batch: 21907**

**Client Sample ID: S-3,1**
**Prep Type: Total/NA**
**Prep Batch: 21733**

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 105 | | 70 - 130 |
| 1,4-Difluorobenzene (Surr) | 94 | | 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 | | |
| 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 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 107 | | 70 - 130 |
| o-Terphenyl (Surr) | 115 | | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

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

**Lab Sample ID: 880-12079-A-1-F MS** — **Client Sample ID: Matrix Spike**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 21379** — **Prep Batch: 21160**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 998 | 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-A-1-G MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 21379** — **Prep Batch: 21160**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 998 | 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 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *50* | *S1-* | *70 - 130* |
| *o-Terphenyl (Surr)* | *9* | *S1-* | *70 - 130* |

**Lab Sample ID: MB 880-21371/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 21357** — **Prep Batch: 21371**

| 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 | | 03/11/22 09:52 | 03/12/22 05:08 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | mg/Kg | | 03/11/22 09:52 | 03/12/22 05:08 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | mg/Kg | | 03/11/22 09:52 | 03/12/22 05:08 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *125* | | *70 - 130* | *03/11/22 09:52* | *03/12/22 05:08* | *1* |
| *o-Terphenyl (Surr)* | *126* | | *70 - 130* | *03/11/22 09:52* | *03/12/22 05:08* | *1* |

**Lab Sample ID: LCS 880-21371/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 21357** — **Prep Batch: 21371**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | 1000 | 848.4 | | mg/Kg | | 85 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | 1000 | 1009 | | mg/Kg | | 101 | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

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

**Lab Sample ID: LCS 880-21371/2-A**
**Matrix: Solid**
**Analysis Batch: 21357**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21371**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 110 | | 70 - 130 |
| o-Terphenyl (Surr) | 97 | | 70 - 130 |

**Lab Sample ID: LCSD 880-21371/3-A**
**Matrix: Solid**
**Analysis Batch: 21357**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 21371**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 955.3 | | mg/Kg | | 96 | 70 - 130 | 12 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1220 | | mg/Kg | | 122 | 70 - 130 | 19 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 132 | S1+ | 70 - 130 |
| o-Terphenyl (Surr) | 120 | | 70 - 130 |

**Lab Sample ID: 880-12309-1 MS**
**Matrix: Solid**
**Analysis Batch: 21357**

**Client Sample ID: S-3,1**
**Prep Type: Total/NA**
**Prep Batch: 21371**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U F1 | 998 | 1444 | F1 | mg/Kg | | 141 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U F1 | 998 | 1460 | F1 | mg/Kg | | 146 | 70 - 130 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 106 | | 70 - 130 |
| o-Terphenyl (Surr) | 91 | | 70 - 130 |

**Lab Sample ID: 880-12309-1 MSD**
**Matrix: Solid**
**Analysis Batch: 21357**

**Client Sample ID: S-3,1**
**Prep Type: Total/NA**
**Prep Batch: 21371**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U F1 | 998 | 1422 | F1 | mg/Kg | | 139 | 70 - 130 | 2 | 20 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U F1 | 998 | 1426 | F1 | mg/Kg | | 143 | 70 - 130 | 2 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 103 | | 70 - 130 |
| o-Terphenyl (Surr) | 89 | | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

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

### Lab Sample ID: MB 880-21467/1-A
**Matrix: Solid**
**Analysis Batch: 21609**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 21467**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:36 | 03/15/22 10:25 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:36 | 03/15/22 10:25 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:36 | 03/15/22 10:25 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *107* | | *70 - 130* | *03/14/22 08:36* | *03/15/22 10:25* | *1* |
| *o-Terphenyl (Surr)* | *117* | | *70 - 130* | *03/14/22 08:36* | *03/15/22 10:25* | *1* |

### Lab Sample ID: LCS 880-21467/2-A
**Matrix: Solid**
**Analysis Batch: 21609**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21467**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 837.3 | | mg/Kg | | 84 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 918.7 | | mg/Kg | | 92 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *97* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *105* | | *70 - 130* |

### Lab Sample ID: LCSD 880-21467/3-A
**Matrix: Solid**
**Analysis Batch: 21609**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 21467**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 867.7 | | mg/Kg | | 87 | 70 - 130 | 4 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1045 | | mg/Kg | | 104 | 70 - 130 | 13 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *104* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *110* | | *70 - 130* |

### Lab Sample ID: 880-12311-A-1-B MS
**Matrix: Solid**
**Analysis Batch: 21609**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 21467**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 998 | 967.9 | | mg/Kg | | 95 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 998 | 952.5 | | mg/Kg | | 95 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

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

**Lab Sample ID: 880-12311-A-1-B MS**
**Matrix: Solid**
**Analysis Batch: 21609**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 21467**

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 103 | | 70 - 130 |
| o-Terphenyl (Surr) | 96 | | 70 - 130 |

**Lab Sample ID: 880-12311-A-1-C MSD**
**Matrix: Solid**
**Analysis Batch: 21609**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 21467**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 998 | 1045 | | mg/Kg | | 103 | 70 - 130 | 8 | 20 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 998 | 976.3 | | mg/Kg | | 98 | 70 - 130 | 2 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 106 | | 70 - 130 |
| o-Terphenyl (Surr) | 96 | | 70 - 130 |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-21600/1-A**
**Matrix: Solid**
**Analysis Batch: 22122**

**Client Sample ID: Method Blank**
**Prep Type: Soluble**

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

**Lab Sample ID: LCS 880-21600/2-A**
**Matrix: Solid**
**Analysis Batch: 22122**

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

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

**Lab Sample ID: LCSD 880-21600/3-A**
**Matrix: Solid**
**Analysis Batch: 22122**

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

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

**Lab Sample ID: 880-12309-1 MS**
**Matrix: Solid**
**Analysis Batch: 22122**

**Client Sample ID: S-3,1**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 11.9 | | 250 | 283.5 | | mg/Kg | | 109 | 90 - 110 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 880-12309-1 MSD**
**Matrix: Solid**
**Analysis Batch: 22122**

**Client Sample ID: S-3,1**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 11.9 | | 250 | 280.2 | | mg/Kg | | 108 | 90 - 110 | 1 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

## GC VOA

### Prep Batch: 21732

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-4 | S-3,10 | Total/NA | Solid | 5035 | |
| MB 880-21732/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-21732/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-21732/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-12543-A-2-A MS | Matrix Spike | Total/NA | Solid | 5035 | |
| 880-12543-A-2-B MSD | Matrix Spike Duplicate | Total/NA | Solid | 5035 | |

### Prep Batch: 21733

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-1 | S-3,1 | Total/NA | Solid | 5035 | |
| 880-12309-2 | S-3,3 | Total/NA | Solid | 5035 | |
| 880-12309-3 | S-3,5 | Total/NA | Solid | 5035 | |
| MB 880-21733/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-21733/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-21733/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-12309-1 MS | S-3,1 | Total/NA | Solid | 5035 | |
| 880-12309-1 MSD | S-3,1 | Total/NA | Solid | 5035 | |

### Analysis Batch: 21846

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-4 | S-3,10 | Total/NA | Solid | 8021B | 21732 |
| MB 880-21732/5-A | Method Blank | Total/NA | Solid | 8021B | 21732 |
| LCS 880-21732/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 21732 |
| LCSD 880-21732/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 21732 |
| 880-12543-A-2-A MS | Matrix Spike | Total/NA | Solid | 8021B | 21732 |
| 880-12543-A-2-B MSD | Matrix Spike Duplicate | Total/NA | Solid | 8021B | 21732 |

### Analysis Batch: 21907

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-1 | S-3,1 | Total/NA | Solid | 8021B | 21733 |
| 880-12309-2 | S-3,3 | Total/NA | Solid | 8021B | 21733 |
| 880-12309-3 | S-3,5 | Total/NA | Solid | 8021B | 21733 |
| MB 880-21733/5-A | Method Blank | Total/NA | Solid | 8021B | 21733 |
| LCS 880-21733/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 21733 |
| LCSD 880-21733/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 21733 |
| 880-12309-1 MS | S-3,1 | Total/NA | Solid | 8021B | 21733 |
| 880-12309-1 MSD | S-3,1 | Total/NA | Solid | 8021B | 21733 |

### Analysis Batch: 21927

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-1 | S-3,1 | Total/NA | Solid | Total BTEX | |
| 880-12309-2 | S-3,3 | Total/NA | Solid | Total BTEX | |
| 880-12309-3 | S-3,5 | Total/NA | Solid | Total BTEX | |
| 880-12309-4 | S-3,10 | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Prep Batch: 21160

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-2 | S-3,3 | Total/NA | Solid | 8015NM Prep | |
| 880-12309-3 | S-3,5 | Total/NA | Solid | 8015NM Prep | |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

## GC Semi VOA (Continued)

### Prep Batch: 21160 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 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-A-1-F MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-12079-A-1-G MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 21357

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-1 | S-3,1 | Total/NA | Solid | 8015B NM | 21371 |
| MB 880-21371/1-A | Method Blank | Total/NA | Solid | 8015B NM | 21371 |
| LCS 880-21371/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 21371 |
| LCSD 880-21371/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 21371 |
| 880-12309-1 MS | S-3,1 | Total/NA | Solid | 8015B NM | 21371 |
| 880-12309-1 MSD | S-3,1 | Total/NA | Solid | 8015B NM | 21371 |

### Prep Batch: 21371

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-1 | S-3,1 | Total/NA | Solid | 8015NM Prep | |
| MB 880-21371/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-21371/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-21371/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-12309-1 MS | S-3,1 | Total/NA | Solid | 8015NM Prep | |
| 880-12309-1 MSD | S-3,1 | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 21379

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-2 | S-3,3 | Total/NA | Solid | 8015B NM | 21160 |
| 880-12309-3 | S-3,5 | 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-A-1-F MS | Matrix Spike | Total/NA | Solid | 8015B NM | 21160 |
| 880-12079-A-1-G MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 21160 |

### Prep Batch: 21467

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-4 | S-3,10 | Total/NA | Solid | 8015NM Prep | |
| MB 880-21467/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-21467/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-21467/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-12311-A-1-B MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-12311-A-1-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 21471

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-1 | S-3,1 | Total/NA | Solid | 8015 NM | |
| 880-12309-2 | S-3,3 | Total/NA | Solid | 8015 NM | |
| 880-12309-3 | S-3,5 | Total/NA | Solid | 8015 NM | |
| 880-12309-4 | S-3,10 | Total/NA | Solid | 8015 NM | |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

## GC Semi VOA

### Analysis Batch: 21609

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-4 | S-3,10 | Total/NA | Solid | 8015B NM | 21467 |
| MB 880-21467/1-A | Method Blank | Total/NA | Solid | 8015B NM | 21467 |
| LCS 880-21467/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 21467 |
| LCSD 880-21467/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 21467 |
| 880-12311-A-1-B MS | Matrix Spike | Total/NA | Solid | 8015B NM | 21467 |
| 880-12311-A-1-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 21467 |

## HPLC/IC

### Leach Batch: 21600

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-1 | S-3,1 | Soluble | Solid | DI Leach | |
| 880-12309-2 | S-3,3 | Soluble | Solid | DI Leach | |
| 880-12309-3 | S-3,5 | Soluble | Solid | DI Leach | |
| 880-12309-4 | S-3,10 | Soluble | Solid | DI Leach | |
| MB 880-21600/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-21600/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-21600/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-12309-1 MS | S-3,1 | Soluble | Solid | DI Leach | |
| 880-12309-1 MSD | S-3,1 | Soluble | Solid | DI Leach | |

### Analysis Batch: 22122

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12309-1 | S-3,1 | Soluble | Solid | 300.0 | 21600 |
| 880-12309-2 | S-3,3 | Soluble | Solid | 300.0 | 21600 |
| 880-12309-3 | S-3,5 | Soluble | Solid | 300.0 | 21600 |
| 880-12309-4 | S-3,10 | Soluble | Solid | 300.0 | 21600 |
| MB 880-21600/1-A | Method Blank | Soluble | Solid | 300.0 | 21600 |
| LCS 880-21600/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 21600 |
| LCSD 880-21600/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 21600 |
| 880-12309-1 MS | S-3,1 | Soluble | Solid | 300.0 | 21600 |
| 880-12309-1 MSD | S-3,1 | Soluble | Solid | 300.0 | 21600 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

## Client Sample ID: S-3,1
**Date Collected: 03/09/22 08:50**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12309-1
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 21733 | 03/17/22 13:09 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21907 | 03/18/22 21:05 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21927 | 03/18/22 17:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21471 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.05 g | 10 mL | 21371 | 03/11/22 09:52 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21357 | 03/12/22 06:13 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 21600 | 03/15/22 08:29 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22122 | 03/24/22 20:34 | CH | XEN MID |

## Client Sample ID: S-3,3
**Date Collected: 03/09/22 08:51**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12309-2
**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 | | | 5.04 g | 5 mL | 21733 | 03/17/22 13:09 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21907 | 03/18/22 21:26 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21927 | 03/18/22 17:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21471 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 21160 | 03/11/22 10:00 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21379 | 03/11/22 20:05 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 21600 | 03/15/22 08:29 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22122 | 03/24/22 21:00 | CH | XEN MID |

## Client Sample ID: S-3,5
**Date Collected: 03/09/22 08:52**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12309-3
**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 | | | 5.02 g | 5 mL | 21733 | 03/17/22 13:09 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21907 | 03/18/22 21:47 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21927 | 03/18/22 17:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21471 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.05 g | 10 mL | 21160 | 03/11/22 10:00 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21379 | 03/11/22 20:26 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 21600 | 03/15/22 08:29 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22122 | 03/24/22 21:09 | CH | XEN MID |

## Client Sample ID: S-3,10
**Date Collected: 03/09/22 08:53**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12309-4
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.02 g | 5 mL | 21732 | 03/18/22 08:00 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21846 | 03/18/22 16:48 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21927 | 03/18/22 17:18 | AJ | XEN MID |

Eurofins Midland

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

## Client Sample ID: S-3,10
**Date Collected: 03/09/22 08:53**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12309-4
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8015 NM | | 1 | | | 21471 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 21467 | 03/14/22 08:36 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21609 | 03/15/22 17:30 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 21600 | 03/15/22 08:29 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22122 | 03/24/22 21:18 | 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. Job ID: 880-12309-1
Project/Site: SD 19 CTB Water Line SDG: 22-0105-01

## 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: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

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

**Protocol References:**

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Water Line

Job ID: 880-12309-1
SDG: 22-0105-01

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-12309-1 | S-3,1 | Solid | 03/09/22 08:50 | 03/10/22 15:05 |
| 880-12309-2 | S-3,3 | Solid | 03/09/22 08:51 | 03/10/22 15:05 |
| 880-12309-3 | S-3,5 | Solid | 03/09/22 08:52 | 03/10/22 15:05 |
| 880-12309-4 | S-3,10 | Solid | 03/09/22 08:53 | 03/10/22 15:05 |

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No. 2461

~~12297~~ 12309 LQ

# CHAIN-OF-CUSTODY

3/25/2022

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 3/10/2022 PAGE 1 OF 1

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: SD 19 CTB Water line

LAI PROJECT #: 22-0105-01 COLLECTOR: JP + JR

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST/NM

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ | CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

| Field Sample I.D. | Lab # | Date | Time | Matrix | # of Containers | HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | BTEX ☒ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ | CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐ | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-3, 1 | | 3/9/22 | 0850 | S | 1 | | | | X | | X | | X | X | X | | | | | | | | | | | | | X | | |
| S-3, 3 | | " | 0851 | " | 1 | | | | " | | " | | " | " | " | | | | | | | | | | | | | " | | |
| S-3, 5 | | " | 0852 | " | 1 | | | | " | | " | | " | " | " | | | | | | | | | | | | | " | | |
| S-3, 10 | | " | 0853 | " | 1 | | | | " | | " | | " | " | " | | | | | | | | | | | | | " | | |
| TOTAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

880-12309 Chain of Custody

| RELINQUISHED BY:(Signature) | DATE/TIME | RECEIVED BY: (Signature) |
|---|---|---|
| [signature] | 3/10/22 1505 | [signature] |
| RELINQUISHED BY:(Signature) | DATE/TIME | RECEIVED BY: (Signature) |
| RELINQUISHED BY:(Signature) | DATE/TIME | RECEIVED BY: (Signature) |

LABORATORY: Xenco

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

**LABORATORY USE ONLY:**
RECEIVING TEMP: °2.1 THERM#: IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

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Received by OCD: 8/23/2023 10:40:52 AM

Released to Imaging: 12/5/2023 1:12:27 PM

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-12309-1
SDG Number: 22-0105-01

**Login Number: 12309**
**List Number: 1**
**Creator: Teel, Brianna**

**List Source: Eurofins Midland**

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

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 5/2/2023 2:23:34 PM

## JOB DESCRIPTION

Salado Draw 19 CTB Water Line

## JOB NUMBER

880-27757-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.



Released to Imaging: 12/5/2023 1:12:27 PM

my EOL

# Eurofins Midland

## Job Notes

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

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

## Authorization

Holly Taylor

Generated
5/2/2023 2:23:34 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB Water Line

Laboratory Job ID: 880-27757-1

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# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

## Job ID: 880-27757-1

**Laboratory: Eurofins Midland**

**Narrative**

**Job Narrative**
**880-27757-1**

**Receipt**
The samples were received on 5/1/2023 9:03 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -1.3°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: C-1 , 1' (880-27757-1), C-2 , 1' (880-27757-2), C-3 , 1' (880-27757-3), C-4 , 1' (880-27757-4) and C-5 , 1' (880-27757-5).

**GC VOA**
Method 8021B: Surrogate recovery for the following samples were outside control limits: C-2 , 1' (880-27757-2). 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: (MB 880-52254/5-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.

**GC Semi VOA**
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-52286 and analytical batch 880-52249 was outside the upper control limits.

Method 8015MOD_NM: CCV biased low however an acceptable CCV was ran within the 12 hour window therefore the data was qualified and reported.(CCV 880-52249/45)

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. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

## Client Sample ID: C-1 , 1'
**Lab Sample ID: 880-27757-1**
**Date Collected: 04/28/23 08:00** **Matrix: Solid**
**Date Received: 05/01/23 09:03**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:28 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:28 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:28 | 1 |
| m,p-Xylenes | <0.00401 | U | 0.00401 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:28 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:28 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:28 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *74* | | *70 - 130* | *05/01/23 09:09* | *05/01/23 11:28* | *1* |
| *1,4-Difluorobenzene (Surr)* | *92* | | *70 - 130* | *05/01/23 09:09* | *05/01/23 11:28* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00401 | U | 0.00401 | | mg/Kg | | | 05/01/23 15:09 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/02/23 10:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 14:44 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 14:44 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 14:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *105* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 14:44* | *1* |
| *o-Terphenyl (Surr)* | *111* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 14:44* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **72.7** | | 5.00 | | mg/Kg | | | 05/01/23 22:38 | 1 |

## Client Sample ID: C-2 , 1'
**Lab Sample ID: 880-27757-2**
**Date Collected: 04/28/23 08:05** **Matrix: Solid**
**Date Received: 05/01/23 09:03**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:49 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:49 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:49 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:49 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:49 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *93* | | *70 - 130* | *05/01/23 09:09* | *05/01/23 11:49* | *1* |
| *1,4-Difluorobenzene (Surr)* | *67* | *S1-* | *70 - 130* | *05/01/23 09:09* | *05/01/23 11:49* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

## Client Sample ID: C-2 , 1'
**Lab Sample ID: 880-27757-2**
**Date Collected: 04/28/23 08:05** **Matrix: Solid**
**Date Received: 05/01/23 09:03**

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 05/01/23 15:09 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 05/02/23 10:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 15:05 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 15:05 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 15:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *98* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 15:05* | *1* |
| *o-Terphenyl (Surr)* | *104* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 15:05* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **78.7** | | 5.01 | | mg/Kg | | | 05/01/23 22:54 | 1 |

## Client Sample ID: C-3 , 1'
**Lab Sample ID: 880-27757-3**
**Date Collected: 04/28/23 08:10** **Matrix: Solid**
**Date Received: 05/01/23 09:03**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:09 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:09 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:09 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:09 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:09 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:09 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | *05/01/23 09:09* | *05/01/23 12:09* | *1* |
| *1,4-Difluorobenzene (Surr)* | *82* | | *70 - 130* | *05/01/23 09:09* | *05/01/23 12:09* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 05/01/23 15:09 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 05/02/23 10:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 15:27 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 15:27 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

## Client Sample ID: C-3 , 1'
**Lab Sample ID: 880-27757-3**
**Date Collected: 04/28/23 08:10** **Matrix: Solid**
**Date Received: 05/01/23 09:03**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 15:27 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *105* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 15:27* | *1* |
| *o-Terphenyl (Surr)* | *111* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 15:27* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **144** | | 5.03 | | mg/Kg | | | 05/01/23 22:59 | 1 |

## Client Sample ID: C-4 , 1'
**Lab Sample ID: 880-27757-4**
**Date Collected: 04/28/23 08:15** **Matrix: Solid**
**Date Received: 05/01/23 09:03**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:30 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:30 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:30 | 1 |
| m,p-Xylenes | <0.00396 | U | 0.00396 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:30 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:30 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:30 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | *05/01/23 09:09* | *05/01/23 12:30* | *1* |
| *1,4-Difluorobenzene (Surr)* | *78* | | *70 - 130* | *05/01/23 09:09* | *05/01/23 12:30* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 05/01/23 15:09 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/02/23 10:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 15:49 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 15:49 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 15:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *95* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 15:49* | *1* |
| *o-Terphenyl (Surr)* | *99* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 15:49* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **130** | | 4.98 | | mg/Kg | | | 05/01/23 23:05 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

**Client Sample ID: C-5 , 1'**
**Lab Sample ID: 880-27757-5**
**Date Collected: 04/28/23 08:20**
**Matrix: Solid**
**Date Received: 05/01/23 09:03**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:50 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:50 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:50 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:50 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:50 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 12:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | *05/01/23 09:09* | *05/01/23 12:50* | *1* |
| *1,4-Difluorobenzene (Surr)* | *72* | | *70 - 130* | *05/01/23 09:09* | *05/01/23 12:50* | *1* |

## Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | | mg/Kg | | | 05/01/23 15:09 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/02/23 10:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 16:39 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 16:39 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 16:39 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *125* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 16:39* | *1* |
| *o-Terphenyl (Surr)* | *130* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 16:39* | *1* |

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **145** | | 5.02 | | mg/Kg | | | 05/01/23 23:10 | 1 |

# Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | BFB1 | DFBZ1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-27757-1 | C-1 , 1' | 74 | 92 |
| 880-27757-1 MS | C-1 , 1' | 108 | 104 |
| 880-27757-1 MSD | C-1 , 1' | 112 | 102 |
| 880-27757-2 | C-2 , 1' | 93 | 67 S1- |
| 880-27757-3 | C-3 , 1' | 101 | 82 |
| 880-27757-4 | C-4 , 1' | 99 | 78 |
| 880-27757-5 | C-5 , 1' | 98 | 72 |
| LCS 880-52254/1-A | Lab Control Sample | 114 | 102 |
| LCSD 880-52254/2-A | Lab Control Sample Dup | 117 | 104 |
| MB 880-52254/5-A | Method Blank | 68 S1- | 91 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | 1CO1 | OTPH1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-27757-1 | C-1 , 1' | 105 | 111 |
| 880-27757-2 | C-2 , 1' | 98 | 104 |
| 880-27757-3 | C-3 , 1' | 105 | 111 |
| 880-27757-4 | C-4 , 1' | 95 | 99 |
| 880-27757-5 | C-5 , 1' | 125 | 130 |
| LCS 880-52286/2-A | Lab Control Sample | 98 | 104 |
| LCSD 880-52286/3-A | Lab Control Sample Dup | 114 | 120 |
| MB 880-52286/1-A | Method Blank | 113 | 134 S1+ |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

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

**Lab Sample ID: MB 880-52254/5-A** **Client Sample ID: Method Blank**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 52252** **Prep Batch: 52254**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *68* | *S1-* | *70 - 130* | *05/01/23 09:09* | *05/01/23 11:06* | *1* |
| *1,4-Difluorobenzene (Surr)* | *91* | | *70 - 130* | *05/01/23 09:09* | *05/01/23 11:06* | *1* |

**Lab Sample ID: LCS 880-52254/1-A** **Client Sample ID: Lab Control Sample**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 52252** **Prep Batch: 52254**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1073 | | mg/Kg | | 107 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1005 | | mg/Kg | | 101 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1067 | | mg/Kg | | 107 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.2256 | | mg/Kg | | 113 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1128 | | mg/Kg | | 113 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *102* | | *70 - 130* |

**Lab Sample ID: LCSD 880-52254/2-A** **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 52252** **Prep Batch: 52254**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1135 | | mg/Kg | | 114 | 70 - 130 | 6 | 35 |
| Toluene | | | 0.100 | 0.1037 | | mg/Kg | | 104 | 70 - 130 | 3 | 35 |
| Ethylbenzene | | | 0.100 | 0.1111 | | mg/Kg | | 111 | 70 - 130 | 4 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2343 | | mg/Kg | | 117 | 70 - 130 | 4 | 35 |
| o-Xylene | | | 0.100 | 0.1171 | | mg/Kg | | 117 | 70 - 130 | 4 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *117* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *104* | | *70 - 130* |

**Lab Sample ID: 880-27757-1 MS** **Client Sample ID: C-1 , 1'**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 52252** **Prep Batch: 52254**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.100 | 0.1123 | | mg/Kg | | 112 | 70 - 130 | | |
| Toluene | <0.00200 | U | 0.100 | 0.09983 | | mg/Kg | | 99 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

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

**Lab Sample ID: 880-27757-1 MS** **Client Sample ID: C-1 , 1'**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 52252** **Prep Batch: 52254**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | <0.00200 | U | 0.100 | 0.1059 | | mg/Kg | | 105 | 70 - 130 |
| m,p-Xylenes | <0.00401 | U | 0.201 | 0.2149 | | mg/Kg | | 107 | 70 - 130 |
| o-Xylene | <0.00200 | U | 0.100 | 0.1042 | | mg/Kg | | 104 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *104* | | *70 - 130* |

**Lab Sample ID: 880-27757-1 MSD** **Client Sample ID: C-1 , 1'**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 52252** **Prep Batch: 52254**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.0990 | 0.09969 | | mg/Kg | | 101 | 70 - 130 | 12 | 35 |
| Toluene | <0.00200 | U | 0.0990 | 0.09076 | | mg/Kg | | 92 | 70 - 130 | 10 | 35 |
| Ethylbenzene | <0.00200 | U | 0.0990 | 0.09788 | | mg/Kg | | 99 | 70 - 130 | 8 | 35 |
| m,p-Xylenes | <0.00401 | U | 0.198 | 0.2010 | | mg/Kg | | 102 | 70 - 130 | 7 | 35 |
| o-Xylene | <0.00200 | U | 0.0990 | 0.09890 | | mg/Kg | | 100 | 70 - 130 | 5 | 35 |

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

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

**Lab Sample ID: MB 880-52286/1-A** **Client Sample ID: Method Blank**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 52249** **Prep Batch: 52286**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 08:35 | 05/01/23 10:23 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 08:35 | 05/01/23 10:23 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 08:35 | 05/01/23 10:23 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *113* | | *70 - 130* | *05/01/23 08:35* | *05/01/23 10:23* | *1* |
| *o-Terphenyl (Surr)* | *134* | *S1+* | *70 - 130* | *05/01/23 08:35* | *05/01/23 10:23* | *1* |

**Lab Sample ID: LCS 880-52286/2-A** **Client Sample ID: Lab Control Sample**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 52249** **Prep Batch: 52286**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 829.8 | | mg/Kg | | 83 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 764.3 | | mg/Kg | | 76 | 70 - 130 |

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# QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

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

**Lab Sample ID: LCS 880-52286/2-A** **Client Sample ID: Lab Control Sample**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 52249** **Prep Batch: 52286**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 98 | | 70 - 130 |
| o-Terphenyl (Surr) | 104 | | 70 - 130 |

**Lab Sample ID: LCSD 880-52286/3-A** **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 52249** **Prep Batch: 52286**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 902.4 | | mg/Kg | | 90 | 70 - 130 | 8 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 899.4 | | mg/Kg | | 90 | 70 - 130 | 16 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 114 | | 70 - 130 |
| o-Terphenyl (Surr) | 120 | | 70 - 130 |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-52321/1-A** **Client Sample ID: Method Blank**
**Matrix: Solid** **Prep Type: Soluble**
**Analysis Batch: 52350**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 05/01/23 22:21 | 1 |

**Lab Sample ID: LCS 880-52321/2-A** **Client Sample ID: Lab Control Sample**
**Matrix: Solid** **Prep Type: Soluble**
**Analysis Batch: 52350**

| 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 880-52321/3-A** **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** **Prep Type: Soluble**
**Analysis Batch: 52350**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 241.6 | | mg/Kg | | 97 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 880-27757-1 MS** **Client Sample ID: C-1 , 1'**
**Matrix: Solid** **Prep Type: Soluble**
**Analysis Batch: 52350**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 72.7 | | 250 | 327.6 | | mg/Kg | | 102 | 90 - 110 | | |

# QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 880-27757-1 MSD** **Client Sample ID: C-1 , 1'**
**Matrix: Solid** **Prep Type: Soluble**
**Analysis Batch: 52350**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 72.7 | | 250 | 328.0 | | mg/Kg | | 102 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

## GC VOA

### Analysis Batch: 52252

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27757-1 | C-1 , 1' | Total/NA | Solid | 8021B | 52254 |
| 880-27757-2 | C-2 , 1' | Total/NA | Solid | 8021B | 52254 |
| 880-27757-3 | C-3 , 1' | Total/NA | Solid | 8021B | 52254 |
| 880-27757-4 | C-4 , 1' | Total/NA | Solid | 8021B | 52254 |
| 880-27757-5 | C-5 , 1' | Total/NA | Solid | 8021B | 52254 |
| MB 880-52254/5-A | Method Blank | Total/NA | Solid | 8021B | 52254 |
| LCS 880-52254/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 52254 |
| LCSD 880-52254/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 52254 |
| 880-27757-1 MS | C-1 , 1' | Total/NA | Solid | 8021B | 52254 |
| 880-27757-1 MSD | C-1 , 1' | Total/NA | Solid | 8021B | 52254 |

### Prep Batch: 52254

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27757-1 | C-1 , 1' | Total/NA | Solid | 5035 | |
| 880-27757-2 | C-2 , 1' | Total/NA | Solid | 5035 | |
| 880-27757-3 | C-3 , 1' | Total/NA | Solid | 5035 | |
| 880-27757-4 | C-4 , 1' | Total/NA | Solid | 5035 | |
| 880-27757-5 | C-5 , 1' | Total/NA | Solid | 5035 | |
| MB 880-52254/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-52254/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-52254/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-27757-1 MS | C-1 , 1' | Total/NA | Solid | 5035 | |
| 880-27757-1 MSD | C-1 , 1' | Total/NA | Solid | 5035 | |

### Analysis Batch: 52335

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27757-1 | C-1 , 1' | Total/NA | Solid | Total BTEX | |
| 880-27757-2 | C-2 , 1' | Total/NA | Solid | Total BTEX | |
| 880-27757-3 | C-3 , 1' | Total/NA | Solid | Total BTEX | |
| 880-27757-4 | C-4 , 1' | Total/NA | Solid | Total BTEX | |
| 880-27757-5 | C-5 , 1' | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Analysis Batch: 52249

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27757-1 | C-1 , 1' | Total/NA | Solid | 8015B NM | 52286 |
| 880-27757-2 | C-2 , 1' | Total/NA | Solid | 8015B NM | 52286 |
| 880-27757-3 | C-3 , 1' | Total/NA | Solid | 8015B NM | 52286 |
| 880-27757-4 | C-4 , 1' | Total/NA | Solid | 8015B NM | 52286 |
| 880-27757-5 | C-5 , 1' | Total/NA | Solid | 8015B NM | 52286 |
| MB 880-52286/1-A | Method Blank | Total/NA | Solid | 8015B NM | 52286 |
| LCS 880-52286/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 52286 |
| LCSD 880-52286/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 52286 |

### Prep Batch: 52286

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27757-1 | C-1 , 1' | Total/NA | Solid | 8015NM Prep | |
| 880-27757-2 | C-2 , 1' | Total/NA | Solid | 8015NM Prep | |
| 880-27757-3 | C-3 , 1' | Total/NA | Solid | 8015NM Prep | |
| 880-27757-4 | C-4 , 1' | Total/NA | Solid | 8015NM Prep | |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

## GC Semi VOA (Continued)

### Prep Batch: 52286 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27757-5 | C-5 , 1' | Total/NA | Solid | 8015NM Prep | |
| MB 880-52286/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-52286/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-52286/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 52380

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27757-1 | C-1 , 1' | Total/NA | Solid | 8015 NM | |
| 880-27757-2 | C-2 , 1' | Total/NA | Solid | 8015 NM | |
| 880-27757-3 | C-3 , 1' | Total/NA | Solid | 8015 NM | |
| 880-27757-4 | C-4 , 1' | Total/NA | Solid | 8015 NM | |
| 880-27757-5 | C-5 , 1' | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 52321

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27757-1 | C-1 , 1' | Soluble | Solid | DI Leach | |
| 880-27757-2 | C-2 , 1' | Soluble | Solid | DI Leach | |
| 880-27757-3 | C-3 , 1' | Soluble | Solid | DI Leach | |
| 880-27757-4 | C-4 , 1' | Soluble | Solid | DI Leach | |
| 880-27757-5 | C-5 , 1' | Soluble | Solid | DI Leach | |
| MB 880-52321/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-52321/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-52321/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-27757-1 MS | C-1 , 1' | Soluble | Solid | DI Leach | |
| 880-27757-1 MSD | C-1 , 1' | Soluble | Solid | DI Leach | |

### Analysis Batch: 52350

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27757-1 | C-1 , 1' | Soluble | Solid | 300.0 | 52321 |
| 880-27757-2 | C-2 , 1' | Soluble | Solid | 300.0 | 52321 |
| 880-27757-3 | C-3 , 1' | Soluble | Solid | 300.0 | 52321 |
| 880-27757-4 | C-4 , 1' | Soluble | Solid | 300.0 | 52321 |
| 880-27757-5 | C-5 , 1' | Soluble | Solid | 300.0 | 52321 |
| MB 880-52321/1-A | Method Blank | Soluble | Solid | 300.0 | 52321 |
| LCS 880-52321/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 52321 |
| LCSD 880-52321/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 52321 |
| 880-27757-1 MS | C-1 , 1' | Soluble | Solid | 300.0 | 52321 |
| 880-27757-1 MSD | C-1 , 1' | Soluble | Solid | 300.0 | 52321 |

# Lab Chronicle

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

## Client Sample ID: C-1 , 1' — Lab Sample ID: 880-27757-1

**Date Collected: 04/28/23 08:00** **Matrix: Solid**
**Date Received: 05/01/23 09:03**

| 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 | 52254 | 05/01/23 09:09 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 52252 | 05/01/23 11:28 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 52335 | 05/01/23 15:09 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 52380 | 05/02/23 10:40 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 52286 | 05/01/23 10:35 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52249 | 05/01/23 14:44 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 52321 | 05/01/23 13:46 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 52350 | 05/01/23 22:38 | SMC | EET MID |

## Client Sample ID: C-2 , 1' — Lab Sample ID: 880-27757-2

**Date Collected: 04/28/23 08:05** **Matrix: Solid**
**Date Received: 05/01/23 09:03**

| 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 | 52254 | 05/01/23 09:09 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 52252 | 05/01/23 11:49 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 52335 | 05/01/23 15:09 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 52380 | 05/02/23 10:40 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 52286 | 05/01/23 10:35 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52249 | 05/01/23 15:05 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 52321 | 05/01/23 13:46 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 52350 | 05/01/23 22:54 | SMC | EET MID |

## Client Sample ID: C-3 , 1' — Lab Sample ID: 880-27757-3

**Date Collected: 04/28/23 08:10** **Matrix: Solid**
**Date Received: 05/01/23 09:03**

| 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 | 52254 | 05/01/23 09:09 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 52252 | 05/01/23 12:09 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 52335 | 05/01/23 15:09 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 52380 | 05/02/23 10:40 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 52286 | 05/01/23 10:35 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52249 | 05/01/23 15:27 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.97 g | 50 mL | 52321 | 05/01/23 13:46 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 52350 | 05/01/23 22:59 | SMC | EET MID |

## Client Sample ID: C-4 , 1' — Lab Sample ID: 880-27757-4

**Date Collected: 04/28/23 08:15** **Matrix: Solid**
**Date Received: 05/01/23 09:03**

| 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 | 52254 | 05/01/23 09:09 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 52252 | 05/01/23 12:30 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 52335 | 05/01/23 15:09 | SM | EET MID |

# Lab Chronicle

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

## Client Sample ID: C-4 , 1'
**Lab Sample ID: 880-27757-4**
**Date Collected: 04/28/23 08:15**
**Matrix: Solid**
**Date Received: 05/01/23 09:03**

| 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 | | | 52380 | 05/02/23 10:40 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 52286 | 05/01/23 10:35 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52249 | 05/01/23 15:49 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 52321 | 05/01/23 13:46 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 52350 | 05/01/23 23:05 | SMC | EET MID |

## Client Sample ID: C-5 , 1'
**Lab Sample ID: 880-27757-5**
**Date Collected: 04/28/23 08:20**
**Matrix: Solid**
**Date Received: 05/01/23 09:03**

| 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 | 52254 | 05/01/23 09:09 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 52252 | 05/01/23 12:50 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 52335 | 05/01/23 15:09 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 52380 | 05/02/23 10:40 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 52286 | 05/01/23 10:35 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52249 | 05/01/23 16:39 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 52321 | 05/01/23 13:46 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 52350 | 05/01/23 23:10 | SMC | EET MID |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

## Laboratory: Eurofins Midland

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

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Texas | NELAP | T104704400-22-25 | 06-30-23 |

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

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

# Method Summary

Client: Larson & Associates, Inc. Job ID: 880-27757-1
Project/Site: Salado Draw 19 CTB Water Line

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

**Protocol References:**

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB Water Line

Job ID: 880-27757-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-27757-1 | C-1 , 1' | Solid | 04/28/23 08:00 | 05/01/23 09:03 |
| 880-27757-2 | C-2 , 1' | Solid | 04/28/23 08:05 | 05/01/23 09:03 |
| 880-27757-3 | C-3 , 1' | Solid | 04/28/23 08:10 | 05/01/23 09:03 |
| 880-27757-4 | C-4 , 1' | Solid | 04/28/23 08:15 | 05/01/23 09:03 |
| 880-27757-5 | C-5 , 1' | Solid | 04/28/23 08:20 | 05/01/23 09:03 |

Released to Imaging: 12/5/2023 1:12:27 PM
Received by OCD: 8/23/2023 10:40:52 AM

27757 No. 2993

# CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to

DATE 4-28-23 PAGE 1 OF 1
PO# _____ LAB WORK ORDER# _____
PROJECT LOCATION OR NAME Salado Draw 19 CTB Water Sta
LAI PROJECT # 22-0105-01 COLLECTOR KG

TRRP report? ☐ Yes ☒ No
TIME ZONE: Time zone/State MNT/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☐ MTBE ☐ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ | CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

| Field Sample I D | Lab # | Date | Time | Matrix | # of Containers | HCl | $HNO_3$ | $H_2SO_4$ NaOH | ICE | UNPRESSERVED | BTEX | TRPH | GASOLINE | DIESEL | OIL | VOC | SVOC | TCLP METALS | LEAD | TDS | pH | CHLORIDE | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C-1, 1' | | 4-28-23 | 0800 | S | 1 | | | | X | | X | | X | X | X | | | | | | | X | 20z |
| C-2, 1' | | | 0805 | | | | | | | | | | | | | | | | | | | | |
| C-3, 1' | | | 0810 | | | | | | | | | | | | | | | | | | | | |
| C-4, 1' | | | 0815 | | | | | | | | | | | | | | | | | | | | |
| C-5, 1' | | | 0820 | | | | | | | | | | | | | | | | | | | | |

880-27757 Chain of Custody

TOTAL 5

| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
|---|---|---|
| Daniel Gallegos | 5/1/23 903 | |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
| LABORATORY Xenco | | |

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

**LABORATORY USE ONLY:**
RECEIVING TEMP 1.6/1.3 THERM# IR28-36
CUSTODY SEALS - ☐ BROKEN ☑ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☑ HAND DELIVERED

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-27757-1
SDG Number:

**Login Number: 27757**
**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 | |

eurofins | Environment Testing America

# ANALYTICAL REPORT

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

Laboratory Job ID: 880-10894-1
Laboratory Sample Delivery Group: 22-0105-4
Client Project/Site: SD 19 CTB - Manifold

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

Attn: Mr. Mark J Larson

Holly Taylor

*Authorized for release by:*
*2/15/2022 8:37:58 AM*

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

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

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

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Laboratory Job ID: 880-10894-1
SDG: 22-0105-4

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Released to Imaging: 12/5/2023 1:12:27 PM

# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-10894-1
Project/Site: SD 19 CTB - Manifold SDG: 22-0105-4

## Qualifiers

### GC 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. |

### GC Semi 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. |
| U | Indicates the analyte was analyzed for but not detected. |

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Job ID: 880-10894-1

### Laboratory: Eurofins Midland

**Narrative**

**Job Narrative**
**880-10894-1**

**Receipt**
The samples were received on 2/2/2022 11:10 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 -8.8°C

**GC VOA**
Method 8021B: Surrogate recovery for the following samples were outside control limits: S-1 0-.5' (880-10894-1), S-1 1' (880-10894-2), S-2 0-.5' (880-10894-3), S-2 1' (880-10894-4), S-3 0-.5' (880-10894-5), S-3 1' (880-10894-6), S-4 0-.5' (880-10894-7), S-4 1' (880-10894-8), S-5 0-.5' (880-10894-9), S-5 1' (880-10894-10) and (CCV 880-18404/53). 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 880-18463 and analytical batch 880-18462 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 880-18467 and analytical batch 880-18404 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

**GC Semi VOA**
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18560 and analytical batch 880-18646 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 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-10895-A-21-C MS). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: S-1 0-.5' (880-10894-1), S-3 0-.5' (880-10894-5) and (880-10870-A-1-D 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.

**HPLC/IC**
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-18572 and analytical batch 880-18733 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 300_ORGFM_28D: The matrix spike (MS) recoveries for preparation batch 880-18573 and analytical batch 880-18737 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.The associated samples are: S-2 0-.5' (880-10894-3), S-2 1' (880-10894-4), S-3 0-.5' (880-10894-5), S-3 1' (880-10894-6), S-4 0-.5' (880-10894-7), S-4 1' (880-10894-8), S-5 0-.5' (880-10894-9), S-5 1' (880-10894-10), S-6 0-.5' (880-10894-11), S-6 1' (880-10894-12) and (880-10894-A-3-D MS).

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: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-1 0-.5'

**Lab Sample ID: 880-10894-1**
**Matrix: Solid**
**Date Collected: 02/01/22 12:55**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 08:40 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 08:40 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 08:40 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 08:40 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 08:40 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 08:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *213* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 08:40* | *1* |
| *1,4-Difluorobenzene (Surr)* | *79* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 08:40* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 16:42 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 16:42 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 16:42 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *63* | *S1-* | *70 - 130* | *02/04/22 11:03* | *02/06/22 16:42* | *1* |
| *o-Terphenyl (Surr)* | *71* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 16:42* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **53.6** | | 4.98 | | mg/Kg | | | 02/09/22 23:30 | 1 |

## Client Sample ID: S-1 1'

**Lab Sample ID: 880-10894-2**
**Matrix: Solid**
**Date Collected: 02/01/22 12:56**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:08 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:08 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:08 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:08 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:08 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *182* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 09:08* | *1* |
| *1,4-Difluorobenzene (Surr)* | *83* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 09:08* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-1 1'

**Lab Sample ID: 880-10894-2**
**Matrix: Solid**
**Date Collected: 02/01/22 12:56**
**Date Received: 02/02/22 11:10**

### 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 | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 17:06 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 17:06 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 17:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *70* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 17:06* | *1* |
| *o-Terphenyl (Surr)* | *76* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 17:06* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **78.1** | | 4.97 | | mg/Kg | | | 02/09/22 23:35 | 1 |

## Client Sample ID: S-2 0-.5'

**Lab Sample ID: 880-10894-3**
**Matrix: Solid**
**Date Collected: 02/01/22 12:57**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:36 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:36 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:36 | 1 |
| m,p-Xylenes | <0.00403 | U | 0.00403 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:36 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:36 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 09:36 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *183* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 09:36* | *1* |
| *1,4-Difluorobenzene (Surr)* | *85* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 09:36* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 17:30 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 17:30 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-2 0-.5'

**Date Collected: 02/01/22 12:57**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10894-3**
**Matrix: Solid**

### 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 | | 02/04/22 11:03 | 02/06/22 17:30 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *79* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 17:30* | *1* |
| *o-Terphenyl (Surr)* | *89* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 17:30* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **4190** | **F1** | 25.0 | | mg/Kg | | | 02/12/22 01:22 | 5 |

## Client Sample ID: S-2 1'

**Date Collected: 02/01/22 12:58**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10894-4**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:04 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:04 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:04 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:04 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:04 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *163* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 10:04* | *1* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 10:04* | *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 | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | | 02/04/22 11:03 | 02/06/22 17:53 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 17:53 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 17:53 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *73* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 17:53* | *1* |
| *o-Terphenyl (Surr)* | *83* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 17:53* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **953** | | 5.01 | | mg/Kg | | | 02/12/22 01:50 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-3 0-.5'

**Lab Sample ID: 880-10894-5**
**Matrix: Solid**
**Date Collected: 02/01/22 12:59**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:32 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:32 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:32 | 1 |
| m,p-Xylenes | <0.00401 | U | 0.00401 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:32 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:32 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 10:32 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *206* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 10:32* | *1* |
| *1,4-Difluorobenzene (Surr)* | *87* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 10:32* | *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 | | | 02/04/22 16:57 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **55.8** | | 50.0 | | mg/Kg | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 18:16 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **55.8** | | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 18:16 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 18:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *66* | *S1-* | *70 - 130* | *02/04/22 11:03* | *02/06/22 18:16* | *1* |
| *o-Terphenyl (Surr)* | *76* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 18:16* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **7210** | | 49.8 | | mg/Kg | | | 02/12/22 02:00 | 10 |

## Client Sample ID: S-3 1'

**Lab Sample ID: 880-10894-6**
**Matrix: Solid**
**Date Collected: 02/01/22 13:00**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:01 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:01 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:01 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:01 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:01 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *191* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 11:01* | *1* |
| *1,4-Difluorobenzene (Surr)* | *84* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 11:01* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-3 1'

**Date Collected: 02/01/22 13:00**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10894-6**
**Matrix: Solid**

### 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 | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | | 02/04/22 11:03 | 02/06/22 19:03 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 19:03 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 19:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *71* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 19:03* | *1* |
| *o-Terphenyl (Surr)* | *81* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 19:03* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **4270** | | 24.8 | | mg/Kg | | | 02/12/22 02:09 | 5 |

## Client Sample ID: S-4 0-.5'

**Date Collected: 02/01/22 13:01**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10894-7**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:29 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:29 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:29 | 1 |
| m,p-Xylenes | <0.00404 | U | 0.00404 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:29 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:29 | 1 |
| Xylenes, Total | <0.00404 | U | 0.00404 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *174* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 11:29* | *1* |
| *1,4-Difluorobenzene (Surr)* | *86* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 11:29* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | | mg/Kg | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 19:26 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 19:26 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-4 0-.5'

**Date Collected: 02/01/22 13:01**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10894-7**
**Matrix: Solid**

### 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 | | 02/04/22 11:03 | 02/06/22 19:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *76* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 19:26* | *1* |
| *o-Terphenyl (Surr)* | *84* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 19:26* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **2270** | | 25.0 | | mg/Kg | | | 02/12/22 02:19 | 5 |

## Client Sample ID: S-4 1'

**Date Collected: 02/01/22 13:02**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10894-8**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:57 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:57 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:57 | 1 |
| m,p-Xylenes | <0.00404 | U | 0.00404 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:57 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:57 | 1 |
| Xylenes, Total | <0.00404 | U | 0.00404 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 11:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *190* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 11:57* | *1* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 11:57* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | | mg/Kg | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 19:49 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 19:49 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 19:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *72* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 19:49* | *1* |
| *o-Terphenyl (Surr)* | *79* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 19:49* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **123** | | 4.96 | | mg/Kg | | | 02/12/22 02:48 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-5 0-.5'

**Lab Sample ID: 880-10894-9**
**Matrix: Solid**
**Date Collected: 02/01/22 13:03**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:24 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:24 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:24 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:24 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:24 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *190* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 12:24* | *1* |
| *1,4-Difluorobenzene (Surr)* | *87* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 12:24* | *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 | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | | 02/04/22 11:03 | 02/06/22 20:12 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 20:12 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 20:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *78* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 20:12* | *1* |
| *o-Terphenyl (Surr)* | *86* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 20:12* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **3240** | | 25.2 | | mg/Kg | | | 02/12/22 02:57 | 5 |

## Client Sample ID: S-5 1'

**Lab Sample ID: 880-10894-10**
**Matrix: Solid**
**Date Collected: 02/01/22 13:04**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:52 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:52 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:52 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:52 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:52 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 12:52 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *186* | *S1+* | *70 - 130* | *02/03/22 10:06* | *02/04/22 12:52* | *1* |
| *1,4-Difluorobenzene (Surr)* | *76* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 12:52* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-5 1'

**Date Collected: 02/01/22 13:04**
**Date Received: 02/02/22 11:10**

## Lab Sample ID: 880-10894-10

**Matrix: Solid**

### 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 | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 20:36 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 20:36 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 20:36 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *74* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 20:36* | *1* |
| *o-Terphenyl (Surr)* | *84* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 20:36* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **2210** | | 24.9 | | mg/Kg | | | 02/12/22 03:07 | 5 |

## Client Sample ID: S-6 0-.5'

**Date Collected: 02/01/22 13:05**
**Date Received: 02/02/22 11:10**

## Lab Sample ID: 880-10894-11

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U F1 | 0.00198 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:28 | 1 |
| Toluene | <0.00198 | U F1 | 0.00198 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:28 | 1 |
| Ethylbenzene | <0.00198 | U F1 | 0.00198 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:28 | 1 |
| m,p-Xylenes | <0.00397 | U F1 | 0.00397 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:28 | 1 |
| o-Xylene | <0.00198 | U F1 | 0.00198 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:28 | 1 |
| Xylenes, Total | <0.00397 | U F1 | 0.00397 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:28 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 09:28* | *1* |
| *1,4-Difluorobenzene (Surr)* | *109* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 09:28* | *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 | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | | 02/04/22 11:03 | 02/06/22 21:01 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 21:01 | 1 |

Eurofins Midland

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-6 0-.5'

**Lab Sample ID: 880-10894-11**
**Matrix: Solid**
**Date Collected: 02/01/22 13:05**
**Date Received: 02/02/22 11:10**

### 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 | | 02/04/22 11:03 | 02/06/22 21:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *77* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 21:01* | *1* |
| *o-Terphenyl (Surr)* | *86* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 21:01* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **126** | | 5.00 | | mg/Kg | | | 02/12/22 03:16 | 1 |

## Client Sample ID: S-6 1'

**Lab Sample ID: 880-10894-12**
**Matrix: Solid**
**Date Collected: 02/01/22 13:06**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:48 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:48 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:48 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:48 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:48 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 09:48* | *1* |
| *1,4-Difluorobenzene (Surr)* | *97* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 09:48* | *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 | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 21:24 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 21:24 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 21:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *77* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 21:24* | *1* |
| *o-Terphenyl (Surr)* | *85* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 21:24* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **127** | | 4.99 | | mg/Kg | | | 02/12/22 03:26 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-7 0-.5'

**Lab Sample ID: 880-10894-13**
**Matrix: Solid**
**Date Collected: 02/01/22 13:07**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:08 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:08 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:08 | 1 |
| m,p-Xylenes | <0.00401 | U | 0.00401 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:08 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:08 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *130* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 10:08* | *1* |
| *1,4-Difluorobenzene (Surr)* | *114* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 10:08* | *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 | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 21:48 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 21:48 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 21:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *74* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 21:48* | *1* |
| *o-Terphenyl (Surr)* | *85* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 21:48* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **116** | | 4.98 | | mg/Kg | | | 02/12/22 03:35 | 1 |

## Client Sample ID: S-7 1'

**Lab Sample ID: 880-10894-14**
**Matrix: Solid**
**Date Collected: 02/01/22 13:08**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:29 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:29 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:29 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:29 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:29 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 10:29* | *1* |
| *1,4-Difluorobenzene (Surr)* | *107* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 10:29* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-7 1'

**Lab Sample ID: 880-10894-14**
**Date Collected: 02/01/22 13:08**
**Matrix: Solid**
**Date Received: 02/02/22 11:10**

### 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 | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 22:11 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 22:11 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:03 | 02/06/22 22:11 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *75* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 22:11* | *1* |
| *o-Terphenyl (Surr)* | *83* | | *70 - 130* | *02/04/22 11:03* | *02/06/22 22:11* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **83.3** | | 5.01 | | mg/Kg | | | 02/12/22 04:04 | 1 |

## Client Sample ID: S-8 0-.5'

**Lab Sample ID: 880-10894-15**
**Date Collected: 02/01/22 13:09**
**Matrix: Solid**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:49 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:49 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:49 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:49 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:49 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 10:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 10:49* | *1* |
| *1,4-Difluorobenzene (Surr)* | *78* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 10:49* | *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 | | | 02/04/22 16:57 | 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 | | | 02/08/22 16:56 | 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 | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 13:33 | 02/06/22 01:58 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 13:33 | 02/06/22 01:58 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-8 0-.5'

**Lab Sample ID: 880-10894-15**
**Matrix: Solid**
**Date Collected: 02/01/22 13:09**
**Date Received: 02/02/22 11:10**

### 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 | | 02/04/22 13:33 | 02/06/22 01:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *95* | | *70 - 130* | *02/04/22 13:33* | *02/06/22 01:58* | *1* |
| *o-Terphenyl (Surr)* | *97* | | *70 - 130* | *02/04/22 13:33* | *02/06/22 01:58* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **942** | | 24.9 | | mg/Kg | | | 02/12/22 04:14 | 5 |

## Client Sample ID: S-8 1'

**Lab Sample ID: 880-10894-16**
**Matrix: Solid**
**Date Collected: 02/01/22 13:10**
**Date Received: 02/02/22 11:10**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 11:10 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 11:10 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 11:10 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 11:10 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 11:10 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 11:10 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 11:10* | *1* |
| *1,4-Difluorobenzene (Surr)* | *105* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 11:10* | *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 | | | 02/04/22 16:57 | 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 | | | 02/07/22 11:51 | 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 | | 02/04/22 11:12 | 02/07/22 01:21 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:12 | 02/07/22 01:21 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:12 | 02/07/22 01:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *88* | | *70 - 130* | *02/04/22 11:12* | *02/07/22 01:21* | *1* |
| *o-Terphenyl (Surr)* | *81* | | *70 - 130* | *02/04/22 11:12* | *02/07/22 01:21* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **855** | | 24.9 | | mg/Kg | | | 02/12/22 04:42 | 5 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## 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) |
| 880-10893-A-4-B MS | Matrix Spike | 168 S1+ | 98 |
| 880-10893-A-4-C MSD | Matrix Spike Duplicate | 157 S1+ | 105 |
| 880-10894-1 | S-1 0-.5' | 213 S1+ | 79 |
| 880-10894-2 | S-1 1' | 182 S1+ | 83 |
| 880-10894-3 | S-2 0-.5' | 183 S1+ | 85 |
| 880-10894-4 | S-2 1' | 163 S1+ | 90 |
| 880-10894-5 | S-3 0-.5' | 206 S1+ | 87 |
| 880-10894-6 | S-3 1' | 191 S1+ | 84 |
| 880-10894-7 | S-4 0-.5' | 174 S1+ | 86 |
| 880-10894-8 | S-4 1' | 190 S1+ | 90 |
| 880-10894-9 | S-5 0-.5' | 190 S1+ | 87 |
| 880-10894-10 | S-5 1' | 186 S1+ | 76 |
| 880-10894-11 | S-6 0-.5' | 105 | 109 |
| 880-10894-11 MS | S-6 0-.5' | 151 S1+ | 111 |
| 880-10894-11 MSD | S-6 0-.5' | 111 | 95 |
| 880-10894-12 | S-6 1' | 112 | 97 |
| 880-10894-13 | S-7 0-.5' | 130 | 114 |
| 880-10894-14 | S-7 1' | 105 | 107 |
| 880-10894-15 | S-8 0-.5' | 96 | 78 |
| 880-10894-16 | S-8 1' | 102 | 105 |
| LCS 880-18463/1-A | Lab Control Sample | 117 | 124 |
| LCS 880-18467/1-A | Lab Control Sample | 180 S1+ | 95 |
| LCSD 880-18463/2-A | Lab Control Sample Dup | 97 | 87 |
| LCSD 880-18467/2-A | Lab Control Sample Dup | 154 S1+ | 87 |
| MB 880-18361/5-A | Method Blank | 109 | 105 |
| MB 880-18404/8 | Method Blank | 120 | 72 |
| MB 880-18463/5-A | Method Blank | 119 | 102 |
| MB 880-18467/5-A | Method Blank | 128 | 76 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | 1CO1 (70-130) | OTPH1 (70-130) |
| 880-10870-A-1-C MS | Matrix Spike | 73 | 76 |
| 880-10870-A-1-D MSD | Matrix Spike Duplicate | 67 S1- | 68 S1- |
| 880-10894-1 | S-1 0-.5' | 63 S1- | 71 |
| 880-10894-2 | S-1 1' | 70 | 76 |
| 880-10894-3 | S-2 0-.5' | 79 | 89 |
| 880-10894-4 | S-2 1' | 73 | 83 |
| 880-10894-5 | S-3 0-.5' | 66 S1- | 76 |
| 880-10894-6 | S-3 1' | 71 | 81 |
| 880-10894-7 | S-4 0-.5' | 76 | 84 |
| 880-10894-8 | S-4 1' | 72 | 79 |
| 880-10894-9 | S-5 0-.5' | 78 | 86 |

Eurofins Midland

# Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-10894-1
Project/Site: SD 19 CTB - Manifold SDG: 22-0105-4

## 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) | | | | | | | | |
| 880-10894-10 | S-5 1' | 74 | 84 | | | | | | | | |
| 880-10894-11 | S-6 0-.5' | 77 | 86 | | | | | | | | |
| 880-10894-12 | S-6 1' | 77 | 85 | | | | | | | | |
| 880-10894-13 | S-7 0-.5' | 74 | 85 | | | | | | | | |
| 880-10894-14 | S-7 1' | 75 | 83 | | | | | | | | |
| 880-10894-15 | S-8 0-.5' | 95 | 97 | | | | | | | | |
| 880-10894-16 | S-8 1' | 88 | 81 | | | | | | | | |
| 880-10895-A-21-C MS | Matrix Spike | 58 S1- | 52 S1- | | | | | | | | |
| 880-10895-A-21-D MSD | Matrix Spike Duplicate | 76 | 73 | | | | | | | | |
| 880-10912-A-21-C MS | Matrix Spike | 82 | 83 | | | | | | | | |
| 880-10912-A-21-D MSD | Matrix Spike Duplicate | 75 | 75 | | | | | | | | |
| LCS 880-18556/2-A | Lab Control Sample | 94 | 102 | | | | | | | | |
| LCSD 880-18556/3-A | Lab Control Sample Dup | 89 | 96 | | | | | | | | |
| MB 880-18556/1-A | Method Blank | 86 | 97 | | | | | | | | |

**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 880-18560/2-A | Lab Control Sample | 84 | 89 | | | | | | | | |
| LCS 880-18594/2-A | Lab Control Sample | 93 | 88 | | | | | | | | |
| LCSD 880-18560/3-A | Lab Control Sample Dup | 98 | 94 | | | | | | | | |
| LCSD 880-18594/3-A | Lab Control Sample Dup | 100 | 103 | | | | | | | | |
| MB 880-18560/1-A | Method Blank | 106 | 108 | | | | | | | | |
| MB 880-18594/1-A | Method Blank | 102 | 107 | | | | | | | | |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

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

**Lab Sample ID: MB 880-18361/5-A**
**Matrix: Solid**
**Analysis Batch: 18462**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 18361**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:00 | 02/03/22 22:14 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:00 | 02/03/22 22:14 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:00 | 02/03/22 22:14 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 09:00 | 02/03/22 22:14 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:00 | 02/03/22 22:14 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 09:00 | 02/03/22 22:14 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* | *02/03/22 09:00* | *02/03/22 22:14* | *1* |
| *1,4-Difluorobenzene (Surr)* | *105* | | *70 - 130* | *02/03/22 09:00* | *02/03/22 22:14* | *1* |

**Lab Sample ID: MB 880-18404/8**
**Matrix: Solid**
**Analysis Batch: 18404**

**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 | | | 02/03/22 17:23 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | | 02/03/22 17:23 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | | 02/03/22 17:23 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | | 02/03/22 17:23 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | | 02/03/22 17:23 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | | 02/03/22 17:23 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *120* | | *70 - 130* | | *02/03/22 17:23* | *1* |
| *1,4-Difluorobenzene (Surr)* | *72* | | *70 - 130* | | *02/03/22 17:23* | *1* |

**Lab Sample ID: MB 880-18463/5-A**
**Matrix: Solid**
**Analysis Batch: 18462**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 18463**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:06 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:06 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:06 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:06 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:06 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 09:47 | 02/04/22 09:06 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *119* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 09:06* | *1* |
| *1,4-Difluorobenzene (Surr)* | *102* | | *70 - 130* | *02/03/22 09:47* | *02/04/22 09:06* | *1* |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

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

**Lab Sample ID: LCS 880-18463/1-A**
**Matrix: Solid**
**Analysis Batch: 18462**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 18463**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.08004 | | mg/Kg | | 80 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.07854 | | mg/Kg | | 79 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.07803 | | mg/Kg | | 78 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.1590 | | mg/Kg | | 79 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.07935 | | mg/Kg | | 79 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *117* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *124* | | *70 - 130* |

**Lab Sample ID: LCSD 880-18463/2-A**
**Matrix: Solid**
**Analysis Batch: 18462**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 18463**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.07142 | | mg/Kg | | 71 | 70 - 130 | 11 | 35 |
| Toluene | | | 0.100 | 0.07131 | | mg/Kg | | 71 | 70 - 130 | 10 | 35 |
| Ethylbenzene | | | 0.100 | 0.07194 | | mg/Kg | | 72 | 70 - 130 | 8 | 35 |
| m,p-Xylenes | | | 0.200 | 0.1438 | | mg/Kg | | 72 | 70 - 130 | 10 | 35 |
| o-Xylene | | | 0.100 | 0.07339 | | mg/Kg | | 73 | 70 - 130 | 8 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *87* | | *70 - 130* |

**Lab Sample ID: 880-10894-11 MS**
**Matrix: Solid**
**Analysis Batch: 18462**

**Client Sample ID: S-6 0-.5'**
**Prep Type: Total/NA**
**Prep Batch: 18463**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U F1 | 0.0996 | 0.02380 | F1 | mg/Kg | | 24 | 70 - 130 | | |
| Toluene | <0.00198 | U F1 | 0.0996 | 0.01997 | F1 | mg/Kg | | 20 | 70 - 130 | | |
| Ethylbenzene | <0.00198 | U F1 | 0.0996 | 0.02563 | F1 | mg/Kg | | 26 | 70 - 130 | | |
| m,p-Xylenes | <0.00397 | U F1 | 0.199 | 0.04632 | F1 | mg/Kg | | 23 | 70 - 130 | | |
| o-Xylene | <0.00198 | U F1 | 0.0996 | 0.04216 | F1 | mg/Kg | | 42 | 70 - 130 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *151* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *111* | | *70 - 130* |

**Lab Sample ID: 880-10894-11 MSD**
**Matrix: Solid**
**Analysis Batch: 18462**

**Client Sample ID: S-6 0-.5'**
**Prep Type: Total/NA**
**Prep Batch: 18463**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U F1 | 0.100 | 0.03207 | F1 | mg/Kg | | 32 | 70 - 130 | 30 | 35 |
| Toluene | <0.00198 | U F1 | 0.100 | 0.02755 | F1 | mg/Kg | | 28 | 70 - 130 | 32 | 35 |
| Ethylbenzene | <0.00198 | U F1 | 0.100 | 0.03155 | F1 | mg/Kg | | 32 | 70 - 130 | 21 | 35 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

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

**Lab Sample ID: 880-10894-11 MSD**
**Matrix: Solid**
**Analysis Batch: 18462**

**Client Sample ID: S-6 0-.5'**
**Prep Type: Total/NA**
**Prep Batch: 18463**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | <0.00397 | U F1 | 0.200 | 0.06298 | F1 | mg/Kg | | 31 | 70 - 130 | 30 | 35 |
| o-Xylene | <0.00198 | U F1 | 0.100 | 0.04333 | F1 | mg/Kg | | 43 | 70 - 130 | 3 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *95* | | *70 - 130* |

**Lab Sample ID: MB 880-18467/5-A**
**Matrix: Solid**
**Analysis Batch: 18404**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 18467**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 02/03/22 10:06 | 02/04/22 02:17 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *128* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 02:17* | *1* |
| *1,4-Difluorobenzene (Surr)* | *76* | | *70 - 130* | *02/03/22 10:06* | *02/04/22 02:17* | *1* |

**Lab Sample ID: LCS 880-18467/1-A**
**Matrix: Solid**
**Analysis Batch: 18404**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 18467**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.08145 | | mg/Kg | | 81 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.08647 | | mg/Kg | | 86 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.09778 | | mg/Kg | | 98 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.1881 | | mg/Kg | | 94 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1011 | | mg/Kg | | 101 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *180* | *S1+* | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *95* | | *70 - 130* |

**Lab Sample ID: LCSD 880-18467/2-A**
**Matrix: Solid**
**Analysis Batch: 18404**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 18467**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.07464 | | mg/Kg | | 75 | 70 - 130 | 9 | 35 |
| Toluene | | | 0.100 | 0.07488 | | mg/Kg | | 75 | 70 - 130 | 14 | 35 |
| Ethylbenzene | | | 0.100 | 0.08497 | | mg/Kg | | 85 | 70 - 130 | 14 | 35 |
| m,p-Xylenes | | | 0.200 | 0.1632 | | mg/Kg | | 82 | 70 - 130 | 14 | 35 |
| o-Xylene | | | 0.100 | 0.08892 | | mg/Kg | | 89 | 70 - 130 | 13 | 35 |

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# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

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

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 154 | S1+ | 70 - 130 |
| 1,4-Difluorobenzene (Surr) | 87 | | 70 - 130 |

**Lab Sample ID: 880-10893-A-4-B MS** — **Client Sample ID: Matrix Spike**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 18404** — **Prep Batch: 18467**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U F1 | 0.0996 | 0.05971 | F1 | mg/Kg | | 60 | 70 - 130 |
| Toluene | <0.00198 | U F1 | 0.0996 | 0.06053 | F1 | mg/Kg | | 61 | 70 - 130 |
| Ethylbenzene | <0.00198 | U F1 | 0.0996 | 0.06883 | F1 | mg/Kg | | 69 | 70 - 130 |
| m,p-Xylenes | <0.00397 | U F1 | 0.199 | 0.1299 | F1 | mg/Kg | | 65 | 70 - 130 |
| o-Xylene | <0.00198 | U | 0.0996 | 0.07058 | | mg/Kg | | 71 | 70 - 130 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 168 | S1+ | 70 - 130 |
| 1,4-Difluorobenzene (Surr) | 98 | | 70 - 130 |

**Lab Sample ID: 880-10893-A-4-C MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 18404** — **Prep Batch: 18467**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U F1 | 0.0996 | 0.06598 | F1 | mg/Kg | | 66 | 70 - 130 | 10 | 35 |
| Toluene | <0.00198 | U F1 | 0.0996 | 0.06460 | F1 | mg/Kg | | 65 | 70 - 130 | 7 | 35 |
| Ethylbenzene | <0.00198 | U F1 | 0.0996 | 0.07157 | | mg/Kg | | 72 | 70 - 130 | 4 | 35 |
| m,p-Xylenes | <0.00397 | U F1 | 0.199 | 0.1353 | F1 | mg/Kg | | 68 | 70 - 130 | 4 | 35 |
| o-Xylene | <0.00198 | U | 0.0996 | 0.07369 | | mg/Kg | | 74 | 70 - 130 | 4 | 35 |

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

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

**Lab Sample ID: MB 880-18556/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 18649** — **Prep Batch: 18556**

| 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 | | 02/04/22 11:03 | 02/06/22 12:53 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | mg/Kg | | 02/04/22 11:03 | 02/06/22 12:53 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | mg/Kg | | 02/04/22 11:03 | 02/06/22 12:53 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1-Chlorooctane (Surr) | 86 | | 70 - 130 | 02/04/22 11:03 | 02/06/22 12:53 | 1 |
| o-Terphenyl (Surr) | 97 | | 70 - 130 | 02/04/22 11:03 | 02/06/22 12:53 | 1 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

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

**Lab Sample ID: LCS 880-18556/2-A**
**Matrix: Solid**
**Analysis Batch: 18649**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 18556**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 825.5 | | mg/Kg | | 83 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1095 | | mg/Kg | | 110 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *94* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *102* | | *70 - 130* |

**Lab Sample ID: LCSD 880-18556/3-A**
**Matrix: Solid**
**Analysis Batch: 18649**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 18556**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 799.4 | | mg/Kg | | 80 | 70 - 130 | 3 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1051 | | mg/Kg | | 105 | 70 - 130 | 4 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *89* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *96* | | *70 - 130* |

**Lab Sample ID: 880-10870-A-1-C MS**
**Matrix: Solid**
**Analysis Batch: 18649**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 18556**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 1000 | 935.8 | | mg/Kg | | 89 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 1000 | 965.8 | | mg/Kg | | 93 | 70 - 130 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *73* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *76* | | *70 - 130* |

**Lab Sample ID: 880-10870-A-1-D MSD**
**Matrix: Solid**
**Analysis Batch: 18649**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 18556**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 998 | 784.1 | | mg/Kg | | 74 | 70 - 130 | 18 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 998 | 873.3 | | mg/Kg | | 84 | 70 - 130 | 10 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *67* | *S1-* | *70 - 130* |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

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

**Lab Sample ID: 880-10870-A-1-D MSD**
**Matrix: Solid**
**Analysis Batch: 18649**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 18556**

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| o-Terphenyl (Surr) | 68 | S1- | 70 - 130 |

**Lab Sample ID: MB 880-18560/1-A**
**Matrix: Solid**
**Analysis Batch: 18646**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 18560**

| 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 | | 02/04/22 11:12 | 02/06/22 21:12 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:12 | 02/06/22 21:12 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 11:12 | 02/06/22 21:12 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1-Chlorooctane (Surr) | 106 | | 70 - 130 | 02/04/22 11:12 | 02/06/22 21:12 | 1 |
| o-Terphenyl (Surr) | 108 | | 70 - 130 | 02/04/22 11:12 | 02/06/22 21:12 | 1 |

**Lab Sample ID: LCS 880-18560/2-A**
**Matrix: Solid**
**Analysis Batch: 18646**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 18560**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 966.6 | | mg/Kg | | 97 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 936.4 | | mg/Kg | | 94 | 70 - 130 | | |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 84 | | 70 - 130 |
| o-Terphenyl (Surr) | 89 | | 70 - 130 |

**Lab Sample ID: LCSD 880-18560/3-A**
**Matrix: Solid**
**Analysis Batch: 18646**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 18560**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 994.4 | | mg/Kg | | 99 | 70 - 130 | 3 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 901.7 | | mg/Kg | | 90 | 70 - 130 | 4 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 98 | | 70 - 130 |
| o-Terphenyl (Surr) | 94 | | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

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

**Lab Sample ID: 880-10895-A-21-C MS**
**Matrix: Solid**
**Analysis Batch: 18646**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 18560**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U F1 F2 | 1000 | 649.9 | F1 | mg/Kg | | 62 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U F1 F2 | 1000 | 661.8 | F1 | mg/Kg | | 66 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *58* | *S1-* | *70 - 130* |
| *o-Terphenyl (Surr)* | *52* | *S1-* | *70 - 130* |

**Lab Sample ID: 880-10895-A-21-D MSD**
**Matrix: Solid**
**Analysis Batch: 18646**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 18560**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U F1 F2 | 998 | 1121 | F2 | mg/Kg | | 109 | 70 - 130 | 53 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U F1 F2 | 998 | 953.1 | F2 | mg/Kg | | 96 | 70 - 130 | 36 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *76* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *73* | | *70 - 130* |

**Lab Sample ID: MB 880-18594/1-A**
**Matrix: Solid**
**Analysis Batch: 18620**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 18594**

| 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 | | 02/04/22 13:33 | 02/05/22 21:26 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 13:33 | 02/05/22 21:26 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 02/04/22 13:33 | 02/05/22 21:26 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *102* | | *70 - 130* | *02/04/22 13:33* | *02/05/22 21:26* | *1* |
| *o-Terphenyl (Surr)* | *107* | | *70 - 130* | *02/04/22 13:33* | *02/05/22 21:26* | *1* |

**Lab Sample ID: LCS 880-18594/2-A**
**Matrix: Solid**
**Analysis Batch: 18620**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 18594**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | 1000 | 1110 | | mg/Kg | | 111 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | 1000 | 1191 | | mg/Kg | | 119 | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

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

**Lab Sample ID: LCS 880-18594/2-A**
**Matrix: Solid**
**Analysis Batch: 18620**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 18594**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 93 | | 70 - 130 |
| o-Terphenyl (Surr) | 88 | | 70 - 130 |

**Lab Sample ID: LCSD 880-18594/3-A**
**Matrix: Solid**
**Analysis Batch: 18620**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 18594**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1103 | | mg/Kg | | 110 | 70 - 130 | 1 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1159 | | mg/Kg | | 116 | 70 - 130 | 3 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 100 | | 70 - 130 |
| o-Terphenyl (Surr) | 103 | | 70 - 130 |

**Lab Sample ID: 880-10912-A-21-C MS**
**Matrix: Solid**
**Analysis Batch: 18620**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 18594**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 1000 | 1126 | | mg/Kg | | 110 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 1000 | 1084 | | mg/Kg | | 108 | 70 - 130 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 82 | | 70 - 130 |
| o-Terphenyl (Surr) | 83 | | 70 - 130 |

**Lab Sample ID: 880-10912-A-21-D MSD**
**Matrix: Solid**
**Analysis Batch: 18620**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 18594**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 998 | 1063 | | mg/Kg | | 104 | 70 - 130 | 6 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 998 | 954.0 | | mg/Kg | | 96 | 70 - 130 | 13 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 75 | | 70 - 130 |
| o-Terphenyl (Surr) | 75 | | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-18572/1-A**
**Matrix: Solid**
**Analysis Batch: 18733**

**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 | | | 02/09/22 21:53 | 1 |

**Lab Sample ID: LCS 880-18572/2-A**
**Matrix: Solid**
**Analysis Batch: 18733**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 253.8 | | mg/Kg | | 102 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-18572/3-A**
**Matrix: Solid**
**Analysis Batch: 18733**

**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 | 251.1 | | mg/Kg | | 100 | 90 - 110 | 1 | 20 |

**Lab Sample ID: 880-10893-A-11-D MS**
**Matrix: Solid**
**Analysis Batch: 18733**

**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 | 278 | F1 | 250 | 501.8 | F1 | mg/Kg | | 89 | 90 - 110 | | |

**Lab Sample ID: 880-10893-A-11-E MSD**
**Matrix: Solid**
**Analysis Batch: 18733**

**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 | 278 | F1 | 250 | 508.2 | | mg/Kg | | 92 | 90 - 110 | 1 | 20 |

**Lab Sample ID: MB 880-18573/1-A**
**Matrix: Solid**
**Analysis Batch: 18737**

**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 | | | 02/12/22 00:52 | 1 |

**Lab Sample ID: LCS 880-18573/2-A**
**Matrix: Solid**
**Analysis Batch: 18737**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 267.7 | | mg/Kg | | 107 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-18573/3-A**
**Matrix: Solid**
**Analysis Batch: 18737**

**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 | 265.7 | | mg/Kg | | 106 | 90 - 110 | 1 | 20 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: 880-10894-3 MS**
**Matrix: Solid**
**Analysis Batch: 18737**

**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 | 4190 | F1 | 1250 | 5577 | F1 | mg/Kg | | 111 | 90 - 110 | | |

**Lab Sample ID: 880-10894-3 MSD**
**Matrix: Solid**
**Analysis Batch: 18737**

**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 | 4190 | F1 | 1250 | 5561 | | mg/Kg | | 110 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 880-10894-13 MS**
**Matrix: Solid**
**Analysis Batch: 18737**

**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 | 116 | | 249 | 386.9 | | mg/Kg | | 109 | 90 - 110 | | |

**Lab Sample ID: 880-10894-13 MSD**
**Matrix: Solid**
**Analysis Batch: 18737**

**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 | 116 | | 249 | 382.5 | | mg/Kg | | 107 | 90 - 110 | 1 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## GC VOA

### Prep Batch: 18361

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-18361/5-A | Method Blank | Total/NA | Solid | 5035 | |

### Analysis Batch: 18404

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-1 | S-1 0-.5' | Total/NA | Solid | 8021B | 18467 |
| 880-10894-2 | S-1 1' | Total/NA | Solid | 8021B | 18467 |
| 880-10894-3 | S-2 0-.5' | Total/NA | Solid | 8021B | 18467 |
| 880-10894-4 | S-2 1' | Total/NA | Solid | 8021B | 18467 |
| 880-10894-5 | S-3 0-.5' | Total/NA | Solid | 8021B | 18467 |
| 880-10894-6 | S-3 1' | Total/NA | Solid | 8021B | 18467 |
| 880-10894-7 | S-4 0-.5' | Total/NA | Solid | 8021B | 18467 |
| 880-10894-8 | S-4 1' | Total/NA | Solid | 8021B | 18467 |
| 880-10894-9 | S-5 0-.5' | Total/NA | Solid | 8021B | 18467 |
| 880-10894-10 | S-5 1' | Total/NA | Solid | 8021B | 18467 |
| MB 880-18404/8 | Method Blank | Total/NA | Solid | 8021B | |
| MB 880-18467/5-A | Method Blank | Total/NA | Solid | 8021B | 18467 |
| LCS 880-18467/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 18467 |
| LCSD 880-18467/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 18467 |
| 880-10893-A-4-B MS | Matrix Spike | Total/NA | Solid | 8021B | 18467 |
| 880-10893-A-4-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 8021B | 18467 |

### Analysis Batch: 18462

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-11 | S-6 0-.5' | Total/NA | Solid | 8021B | 18463 |
| 880-10894-12 | S-6 1' | Total/NA | Solid | 8021B | 18463 |
| 880-10894-13 | S-7 0-.5' | Total/NA | Solid | 8021B | 18463 |
| 880-10894-14 | S-7 1' | Total/NA | Solid | 8021B | 18463 |
| 880-10894-15 | S-8 0-.5' | Total/NA | Solid | 8021B | 18463 |
| 880-10894-16 | S-8 1' | Total/NA | Solid | 8021B | 18463 |
| MB 880-18361/5-A | Method Blank | Total/NA | Solid | 8021B | 18361 |
| MB 880-18463/5-A | Method Blank | Total/NA | Solid | 8021B | 18463 |
| LCS 880-18463/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 18463 |
| LCSD 880-18463/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 18463 |
| 880-10894-11 MS | S-6 0-.5' | Total/NA | Solid | 8021B | 18463 |
| 880-10894-11 MSD | S-6 0-.5' | Total/NA | Solid | 8021B | 18463 |

### Prep Batch: 18463

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-11 | S-6 0-.5' | Total/NA | Solid | 5035 | |
| 880-10894-12 | S-6 1' | Total/NA | Solid | 5035 | |
| 880-10894-13 | S-7 0-.5' | Total/NA | Solid | 5035 | |
| 880-10894-14 | S-7 1' | Total/NA | Solid | 5035 | |
| 880-10894-15 | S-8 0-.5' | Total/NA | Solid | 5035 | |
| 880-10894-16 | S-8 1' | Total/NA | Solid | 5035 | |
| MB 880-18463/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-18463/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-18463/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-10894-11 MS | S-6 0-.5' | Total/NA | Solid | 5035 | |
| 880-10894-11 MSD | S-6 0-.5' | Total/NA | Solid | 5035 | |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## GC VOA

### Prep Batch: 18467

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-1 | S-1 0-.5' | Total/NA | Solid | 5035 | |
| 880-10894-2 | S-1 1' | Total/NA | Solid | 5035 | |
| 880-10894-3 | S-2 0-.5' | Total/NA | Solid | 5035 | |
| 880-10894-4 | S-2 1' | Total/NA | Solid | 5035 | |
| 880-10894-5 | S-3 0-.5' | Total/NA | Solid | 5035 | |
| 880-10894-6 | S-3 1' | Total/NA | Solid | 5035 | |
| 880-10894-7 | S-4 0-.5' | Total/NA | Solid | 5035 | |
| 880-10894-8 | S-4 1' | Total/NA | Solid | 5035 | |
| 880-10894-9 | S-5 0-.5' | Total/NA | Solid | 5035 | |
| 880-10894-10 | S-5 1' | Total/NA | Solid | 5035 | |
| MB 880-18467/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-18467/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-18467/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-10893-A-4-B MS | Matrix Spike | Total/NA | Solid | 5035 | |
| 880-10893-A-4-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 5035 | |

### Analysis Batch: 18617

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-1 | S-1 0-.5' | Total/NA | Solid | Total BTEX | |
| 880-10894-2 | S-1 1' | Total/NA | Solid | Total BTEX | |
| 880-10894-3 | S-2 0-.5' | Total/NA | Solid | Total BTEX | |
| 880-10894-4 | S-2 1' | Total/NA | Solid | Total BTEX | |
| 880-10894-5 | S-3 0-.5' | Total/NA | Solid | Total BTEX | |
| 880-10894-6 | S-3 1' | Total/NA | Solid | Total BTEX | |
| 880-10894-7 | S-4 0-.5' | Total/NA | Solid | Total BTEX | |
| 880-10894-8 | S-4 1' | Total/NA | Solid | Total BTEX | |
| 880-10894-9 | S-5 0-.5' | Total/NA | Solid | Total BTEX | |
| 880-10894-10 | S-5 1' | Total/NA | Solid | Total BTEX | |
| 880-10894-11 | S-6 0-.5' | Total/NA | Solid | Total BTEX | |
| 880-10894-12 | S-6 1' | Total/NA | Solid | Total BTEX | |
| 880-10894-13 | S-7 0-.5' | Total/NA | Solid | Total BTEX | |
| 880-10894-14 | S-7 1' | Total/NA | Solid | Total BTEX | |
| 880-10894-15 | S-8 0-.5' | Total/NA | Solid | Total BTEX | |
| 880-10894-16 | S-8 1' | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Prep Batch: 18556

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-1 | S-1 0-.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-2 | S-1 1' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-3 | S-2 0-.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-4 | S-2 1' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-5 | S-3 0-.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-6 | S-3 1' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-7 | S-4 0-.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-8 | S-4 1' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-9 | S-5 0-.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-10 | S-5 1' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-11 | S-6 0-.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-12 | S-6 1' | Total/NA | Solid | 8015NM Prep | |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-10894-1
Project/Site: SD 19 CTB - Manifold SDG: 22-0105-4

## GC Semi VOA (Continued)

### Prep Batch: 18556 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-13 | S-7 0-.5' | Total/NA | Solid | 8015NM Prep | |
| 880-10894-14 | S-7 1' | Total/NA | Solid | 8015NM Prep | |
| MB 880-18556/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-18556/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-18556/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-10870-A-1-C MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-10870-A-1-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Prep Batch: 18560

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-16 | S-8 1' | Total/NA | Solid | 8015NM Prep | |
| MB 880-18560/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-18560/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-18560/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-10895-A-21-C MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-10895-A-21-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Prep Batch: 18594

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-15 | S-8 0-.5' | Total/NA | Solid | 8015NM Prep | |
| MB 880-18594/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-18594/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-18594/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-10912-A-21-C MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-10912-A-21-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 18620

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-15 | S-8 0-.5' | Total/NA | Solid | 8015B NM | 18594 |
| MB 880-18594/1-A | Method Blank | Total/NA | Solid | 8015B NM | 18594 |
| LCS 880-18594/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 18594 |
| LCSD 880-18594/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 18594 |
| 880-10912-A-21-C MS | Matrix Spike | Total/NA | Solid | 8015B NM | 18594 |
| 880-10912-A-21-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 18594 |

### Analysis Batch: 18646

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-16 | S-8 1' | Total/NA | Solid | 8015B NM | 18560 |
| MB 880-18560/1-A | Method Blank | Total/NA | Solid | 8015B NM | 18560 |
| LCS 880-18560/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 18560 |
| LCSD 880-18560/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 18560 |
| 880-10895-A-21-C MS | Matrix Spike | Total/NA | Solid | 8015B NM | 18560 |
| 880-10895-A-21-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 18560 |

### Analysis Batch: 18649

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-1 | S-1 0-.5' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-2 | S-1 1' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-3 | S-2 0-.5' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-4 | S-2 1' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-5 | S-3 0-.5' | Total/NA | Solid | 8015B NM | 18556 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## GC Semi VOA (Continued)

### Analysis Batch: 18649 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-6 | S-3 1' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-7 | S-4 0-.5' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-8 | S-4 1' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-9 | S-5 0-.5' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-10 | S-5 1' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-11 | S-6 0-.5' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-12 | S-6 1' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-13 | S-7 0-.5' | Total/NA | Solid | 8015B NM | 18556 |
| 880-10894-14 | S-7 1' | Total/NA | Solid | 8015B NM | 18556 |
| MB 880-18556/1-A | Method Blank | Total/NA | Solid | 8015B NM | 18556 |
| LCS 880-18556/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 18556 |
| LCSD 880-18556/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 18556 |
| 880-10870-A-1-C MS | Matrix Spike | Total/NA | Solid | 8015B NM | 18556 |
| 880-10870-A-1-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 18556 |

### Analysis Batch: 18702

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-16 | S-8 1' | Total/NA | Solid | 8015 NM | |

### Analysis Batch: 18870

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-1 | S-1 0-.5' | Total/NA | Solid | 8015 NM | |
| 880-10894-2 | S-1 1' | Total/NA | Solid | 8015 NM | |
| 880-10894-3 | S-2 0-.5' | Total/NA | Solid | 8015 NM | |
| 880-10894-4 | S-2 1' | Total/NA | Solid | 8015 NM | |
| 880-10894-5 | S-3 0-.5' | Total/NA | Solid | 8015 NM | |
| 880-10894-6 | S-3 1' | Total/NA | Solid | 8015 NM | |
| 880-10894-7 | S-4 0-.5' | Total/NA | Solid | 8015 NM | |
| 880-10894-8 | S-4 1' | Total/NA | Solid | 8015 NM | |
| 880-10894-9 | S-5 0-.5' | Total/NA | Solid | 8015 NM | |
| 880-10894-10 | S-5 1' | Total/NA | Solid | 8015 NM | |
| 880-10894-11 | S-6 0-.5' | Total/NA | Solid | 8015 NM | |
| 880-10894-12 | S-6 1' | Total/NA | Solid | 8015 NM | |
| 880-10894-13 | S-7 0-.5' | Total/NA | Solid | 8015 NM | |
| 880-10894-14 | S-7 1' | Total/NA | Solid | 8015 NM | |
| 880-10894-15 | S-8 0-.5' | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 18572

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-1 | S-1 0-.5' | Soluble | Solid | DI Leach | |
| 880-10894-2 | S-1 1' | Soluble | Solid | DI Leach | |
| MB 880-18572/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-18572/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-18572/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-10893-A-11-D MS | Matrix Spike | Soluble | Solid | DI Leach | |
| 880-10893-A-11-E MSD | Matrix Spike Duplicate | Soluble | Solid | DI Leach | |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## HPLC/IC

### Leach Batch: 18573

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-3 | S-2 0-.5' | Soluble | Solid | DI Leach | |
| 880-10894-4 | S-2 1' | Soluble | Solid | DI Leach | |
| 880-10894-5 | S-3 0-.5' | Soluble | Solid | DI Leach | |
| 880-10894-6 | S-3 1' | Soluble | Solid | DI Leach | |
| 880-10894-7 | S-4 0-.5' | Soluble | Solid | DI Leach | |
| 880-10894-8 | S-4 1' | Soluble | Solid | DI Leach | |
| 880-10894-9 | S-5 0-.5' | Soluble | Solid | DI Leach | |
| 880-10894-10 | S-5 1' | Soluble | Solid | DI Leach | |
| 880-10894-11 | S-6 0-.5' | Soluble | Solid | DI Leach | |
| 880-10894-12 | S-6 1' | Soluble | Solid | DI Leach | |
| 880-10894-13 | S-7 0-.5' | Soluble | Solid | DI Leach | |
| 880-10894-14 | S-7 1' | Soluble | Solid | DI Leach | |
| 880-10894-15 | S-8 0-.5' | Soluble | Solid | DI Leach | |
| 880-10894-16 | S-8 1' | Soluble | Solid | DI Leach | |
| MB 880-18573/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-18573/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-18573/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-10894-3 MS | S-2 0-.5' | Soluble | Solid | DI Leach | |
| 880-10894-3 MSD | S-2 0-.5' | Soluble | Solid | DI Leach | |
| 880-10894-13 MS | S-7 0-.5' | Soluble | Solid | DI Leach | |
| 880-10894-13 MSD | S-7 0-.5' | Soluble | Solid | DI Leach | |

### Analysis Batch: 18733

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-1 | S-1 0-.5' | Soluble | Solid | 300.0 | 18572 |
| 880-10894-2 | S-1 1' | Soluble | Solid | 300.0 | 18572 |
| MB 880-18572/1-A | Method Blank | Soluble | Solid | 300.0 | 18572 |
| LCS 880-18572/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 18572 |
| LCSD 880-18572/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 18572 |
| 880-10893-A-11-D MS | Matrix Spike | Soluble | Solid | 300.0 | 18572 |
| 880-10893-A-11-E MSD | Matrix Spike Duplicate | Soluble | Solid | 300.0 | 18572 |

### Analysis Batch: 18737

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-3 | S-2 0-.5' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-4 | S-2 1' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-5 | S-3 0-.5' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-6 | S-3 1' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-7 | S-4 0-.5' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-8 | S-4 1' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-9 | S-5 0-.5' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-10 | S-5 1' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-11 | S-6 0-.5' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-12 | S-6 1' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-13 | S-7 0-.5' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-14 | S-7 1' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-15 | S-8 0-.5' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-16 | S-8 1' | Soluble | Solid | 300.0 | 18573 |
| MB 880-18573/1-A | Method Blank | Soluble | Solid | 300.0 | 18573 |
| LCS 880-18573/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 18573 |
| LCSD 880-18573/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 18573 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## HPLC/IC (Continued)

### Analysis Batch: 18737 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-10894-3 MS | S-2 0-.5' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-3 MSD | S-2 0-.5' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-13 MS | S-7 0-.5' | Soluble | Solid | 300.0 | 18573 |
| 880-10894-13 MSD | S-7 0-.5' | Soluble | Solid | 300.0 | 18573 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-1 0-.5'

**Lab Sample ID: 880-10894-1**
**Matrix: Solid**
**Date Collected: 02/01/22 12:55**
**Date Received: 02/02/22 11:10**

| 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 | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 08:40 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 16:42 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 23:30 | CH | XEN MID |

## Client Sample ID: S-1 1'

**Lab Sample ID: 880-10894-2**
**Matrix: Solid**
**Date Collected: 02/01/22 12:56**
**Date Received: 02/02/22 11:10**

| 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 | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 09:08 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 17:06 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 18572 | 02/04/22 12:49 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18733 | 02/09/22 23:35 | CH | XEN MID |

## Client Sample ID: S-2 0-.5'

**Lab Sample ID: 880-10894-3**
**Matrix: Solid**
**Date Collected: 02/01/22 12:57**
**Date Received: 02/02/22 11:10**

| 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 | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 09:36 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 17:30 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 18737 | 02/12/22 01:22 | SC | XEN MID |

## Client Sample ID: S-2 1'

**Lab Sample ID: 880-10894-4**
**Matrix: Solid**
**Date Collected: 02/01/22 12:58**
**Date Received: 02/02/22 11:10**

| 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 | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 10:04 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |

Eurofins Midland

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-2 1'

**Lab Sample ID: 880-10894-4**
**Matrix: Solid**
**Date Collected: 02/01/22 12:58**
**Date Received: 02/02/22 11:10**

| 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 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 17:53 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18737 | 02/12/22 01:50 | SC | XEN MID |

## Client Sample ID: S-3 0-.5'

**Lab Sample ID: 880-10894-5**
**Matrix: Solid**
**Date Collected: 02/01/22 12:59**
**Date Received: 02/02/22 11:10**

| 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 | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 10:32 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 18:16 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 10 | | | 18737 | 02/12/22 02:00 | SC | XEN MID |

## Client Sample ID: S-3 1'

**Lab Sample ID: 880-10894-6**
**Matrix: Solid**
**Date Collected: 02/01/22 13:00**
**Date Received: 02/02/22 11:10**

| 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 | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 11:01 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 19:03 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 18737 | 02/12/22 02:09 | SC | XEN MID |

## Client Sample ID: S-4 0-.5'

**Lab Sample ID: 880-10894-7**
**Matrix: Solid**
**Date Collected: 02/01/22 13:01**
**Date Received: 02/02/22 11:10**

| 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 | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 11:29 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 19:26 | AJ | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-4 0-.5'

**Date Collected: 02/01/22 13:01**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10894-7**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 18737 | 02/12/22 02:19 | SC | XEN MID |

## Client Sample ID: S-4 1'

**Date Collected: 02/01/22 13:02**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10894-8**
**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 | | | 4.95 g | 5 mL | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 11:57 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 19:49 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.04 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18737 | 02/12/22 02:48 | SC | XEN MID |

## Client Sample ID: S-5 0-.5'

**Date Collected: 02/01/22 13:03**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10894-9**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 12:24 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 20:12 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 18737 | 02/12/22 02:57 | SC | XEN MID |

## Client Sample ID: S-5 1'

**Date Collected: 02/01/22 13:04**
**Date Received: 02/02/22 11:10**

**Lab Sample ID: 880-10894-10**
**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 | | | 4.98 g | 5 mL | 18467 | 02/03/22 10:06 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18404 | 02/04/22 12:52 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 20:36 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 18737 | 02/12/22 03:07 | SC | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-6 0-.5'

**Date Collected: 02/01/22 13:05**
**Date Received: 02/02/22 11:10**

## Lab Sample ID: 880-10894-11

**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 | 18463 | 02/03/22 09:47 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18462 | 02/04/22 09:28 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 21:01 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18737 | 02/12/22 03:16 | SC | XEN MID |

## Client Sample ID: S-6 1'

**Date Collected: 02/01/22 13:06**
**Date Received: 02/02/22 11:10**

## Lab Sample ID: 880-10894-12

**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 | 18463 | 02/03/22 09:47 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18462 | 02/04/22 09:48 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 21:24 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18737 | 02/12/22 03:26 | SC | XEN MID |

## Client Sample ID: S-7 0-.5'

**Date Collected: 02/01/22 13:07**
**Date Received: 02/02/22 11:10**

## Lab Sample ID: 880-10894-13

**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 | 18463 | 02/03/22 09:47 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18462 | 02/04/22 10:08 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 21:48 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18737 | 02/12/22 03:35 | SC | XEN MID |

## Client Sample ID: S-7 1'

**Date Collected: 02/01/22 13:08**
**Date Received: 02/02/22 11:10**

## Lab Sample ID: 880-10894-14

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 18463 | 02/03/22 09:47 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18462 | 02/04/22 10:29 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

## Client Sample ID: S-7 1'

**Lab Sample ID: 880-10894-14**
**Matrix: Solid**
**Date Collected: 02/01/22 13:08**
**Date Received: 02/02/22 11:10**

| 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 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 18556 | 02/04/22 11:03 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18649 | 02/06/22 22:11 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 18737 | 02/12/22 04:04 | SC | XEN MID |

## Client Sample ID: S-8 0-.5'

**Lab Sample ID: 880-10894-15**
**Matrix: Solid**
**Date Collected: 02/01/22 13:09**
**Date Received: 02/02/22 11:10**

| 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 | 18463 | 02/03/22 09:47 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18462 | 02/04/22 10:49 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18870 | 02/08/22 16:56 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18594 | 02/04/22 13:33 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18620 | 02/06/22 01:58 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 18737 | 02/12/22 04:14 | SC | XEN MID |

## Client Sample ID: S-8 1'

**Lab Sample ID: 880-10894-16**
**Matrix: Solid**
**Date Collected: 02/01/22 13:10**
**Date Received: 02/02/22 11:10**

| 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 | 18463 | 02/03/22 09:47 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 18462 | 02/04/22 11:10 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 18617 | 02/04/22 16:57 | MR | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 18702 | 02/07/22 11:51 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 18560 | 02/04/22 11:12 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 18646 | 02/07/22 01:21 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 18573 | 02/04/22 12:51 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 18737 | 02/12/22 04:42 | SC | 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. Job ID: 880-10894-1
Project/Site: SD 19 CTB - Manifold SDG: 22-0105-4

## 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: 880-10894-1
Project/Site: SD 19 CTB - Manifold SDG: 22-0105-4

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

**Protocol References:**

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB - Manifold

Job ID: 880-10894-1
SDG: 22-0105-4

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-10894-1 | S-1 0-.5' | Solid | 02/01/22 12:55 | 02/02/22 11:10 |
| 880-10894-2 | S-1 1' | Solid | 02/01/22 12:56 | 02/02/22 11:10 |
| 880-10894-3 | S-2 0-.5' | Solid | 02/01/22 12:57 | 02/02/22 11:10 |
| 880-10894-4 | S-2 1' | Solid | 02/01/22 12:58 | 02/02/22 11:10 |
| 880-10894-5 | S-3 0-.5' | Solid | 02/01/22 12:59 | 02/02/22 11:10 |
| 880-10894-6 | S-3 1' | Solid | 02/01/22 13:00 | 02/02/22 11:10 |
| 880-10894-7 | S-4 0-.5' | Solid | 02/01/22 13:01 | 02/02/22 11:10 |
| 880-10894-8 | S-4 1' | Solid | 02/01/22 13:02 | 02/02/22 11:10 |
| 880-10894-9 | S-5 0-.5' | Solid | 02/01/22 13:03 | 02/02/22 11:10 |
| 880-10894-10 | S-5 1' | Solid | 02/01/22 13:04 | 02/02/22 11:10 |
| 880-10894-11 | S-6 0-.5' | Solid | 02/01/22 13:05 | 02/02/22 11:10 |
| 880-10894-12 | S-6 1' | Solid | 02/01/22 13:06 | 02/02/22 11:10 |
| 880-10894-13 | S-7 0-.5' | Solid | 02/01/22 13:07 | 02/02/22 11:10 |
| 880-10894-14 | S-7 1' | Solid | 02/01/22 13:08 | 02/02/22 11:10 |
| 880-10894-15 | S-8 0-.5' | Solid | 02/01/22 13:09 | 02/02/22 11:10 |
| 880-10894-16 | S-8 1' | Solid | 02/01/22 13:10 | 02/02/22 11:10 |

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No. 2446

10894

# CHAIN-OF-CUSTODY

2/15/2022

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 2/2/2022 PAGE 1 OF 2

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: SD 19 CTB - MANIFOLD

LAI PROJECT #: 22-0105-04 COLLECTOR: DSG/BN

Data Reported to:

TRRP report? ☐ Yes ☒ No

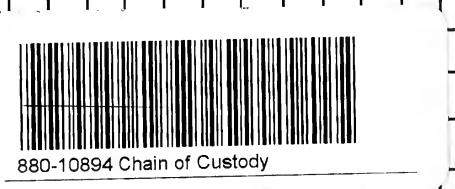
TIME ZONE: Time zone/State: NM/MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl, $HNO_3$, $H_2SO_4$ ☐ NaOH ☐, ICE, UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐

| Field Sample I.D. | Lab # | Date | Time | Matrix | # of Containers | HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | BTEX ☒ MTBE ☐ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐ | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-1 0.5' | | 2/1/22 | 1255 | S | 1 | | | | X | | X | | | X | X | X | | | | | | | | | | | | X | | |
| S-1 1' | | | 1256 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-2 0.5' | | | 1257 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-2 1' | | | 1258 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-3 0.5' | | | 1259 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-3 1' | | | 1300 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-4 0.5' | | | 1301 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-4 1' | | | 1302 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-5 0.5' | | | 1303 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-5 1' | | | 1304 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-6 0.5' | | | 1305 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-6 1' | | | 1306 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-7 0.5' | | | 1307 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-7 1' | | | 1308 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-8 0.5' | | | 1309 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| RELINQUISHED BY:(Signature) | DATE/TIME | RECEIVED BY: (Signature) |
|---|---|---|
| [signature] | 2/2/2022 | [signature] 1110 2/2/22 |
| RELINQUISHED BY:(Signature) | DATE/TIME | RECEIVED BY: (Signature) |
| RELINQUISHED BY:(Signature) | DATE/TIME | RECEIVED BY: (Signature) |

LABORATORY: VENCO

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

**LABORATORY USE ONLY:**
RECEIVING TEMP: -0.9/-0.8 THERM#: IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 8/23/2023 10:40:52 AM

Released to Imaging: 12/5/2023 1:12:27 PM

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No. 2447

# CHAIN-OF-CUSTODY

2/15/2022

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 2/2/2022 PAGE 2 OF 2

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: SD CTB 19 - MANIFOLD

LAI PROJECT #: 22-0105-04 COLLECTOR: DSGIRN

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

| Field Sample I.D. | Lab # | Date | Time | Matrix | # of Containers | PRESERVATION: HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | ANALYSES: BTEX ☒ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☒ | DIESEL - MOD 8015 ☒ | OIL - MOD 8015 ☐ | VOC 8260 ☐ | SVOC 8270 ☐ | PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ | 8082 PCBS ☐ | 8151 HERBICIDES ☐ | TCLP - METALS (RCRA) ☐ | TCLP - PEST ☐ | TCLP VOC ☐ | TCLP - HERB ☐ | TOTAL METALS (RCRA) ☐ | Semi-VOC ☐ | LEAD - TOTAL ☐ | OTHER LIST ☐ | D.W. 200.8 ☐ | RCI ☐ | TCLP ☐ | TOX ☐ | TDS ☐ | FLASHPOINT ☐ | pH ☐ | TSS ☐ | HEXAVALENT CHROMIUM ☐ | % MOISTURE ☐ | CYANIDE ☐ | EXPLOSIVES ☐ | PECHLORATE ☐ | CHLORIDE ☒ | ANIONS ☐ | ALKALINITY ☐ | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-8 1' | | 2/1/22 | 1310 | S | 1 | | | | X | | X | | X | X | X | | | | | | | | | | | | | | | | | | | | | | | | | X | | | |
| TOTAL 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

RELINQUISHED BY:(Signature) DATE/TIME 2/2/2022 RECEIVED BY: (Signature)

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

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

LABORATORY: XENCO

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

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



Received by OCD: 8/23/2023 10:40:52 AM

Released to Imaging: 12/5/2023 1:12:27 PM

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-10894-1
SDG Number: 22-0105-4

**Login Number: 10894**
**List Number: 1**
**Creator: Kramer, Jessica**

**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 | |

eurofins | Environment Testing America

# ANALYTICAL REPORT

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

Laboratory Job ID: 880-12315-1
Laboratory Sample Delivery Group: 22-0105-04
Client Project/Site: SD 19 CTB Manifold

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

Attn: Mr. Mark J Larson

Holly Taylor

*Authorized for release by:*
*3/25/2022 9:38:33 AM*

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

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

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

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Laboratory Job ID: 880-12315-1
SDG: 22-0105-04

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# Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Job ID: 880-12315-1

### Laboratory: Eurofins Midland

**Narrative**

**Job Narrative**
**880-12315-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 3/10/2022 3:05 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.1º C.

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

**GC Semi VOA**
Method 8015B NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-21371 and analytical batch 880-21357 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015B NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-21371/3-A). Evidence of matrix interferences is not obvious.

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

**General Chemistry**
Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-22210 and analytical batch 880-22211 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 300.0: The matrix spike (MS) recoveries for preparation batch 880-21602 and analytical batch 880-22052 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

**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: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-2,1

**Date Collected: 03/08/22 12:30**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-1

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:15 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:15 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:15 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:15 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:15 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:15 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 22:15* | *1* |
| *1,4-Difluorobenzene (Surr)* | *107* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 22:15* | *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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 21:56 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 21:56 | 1 |
| Oil Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 21:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *104* | | *70 - 130* | *03/14/22 08:40* | *03/14/22 21:56* | *1* |
| *o-Terphenyl (Surr)* | *101* | | *70 - 130* | *03/14/22 08:40* | *03/14/22 21:56* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **5960** | | 49.8 | | mg/Kg | | | 03/24/22 02:49 | 10 |

## Client Sample ID: S-2,3

**Date Collected: 03/08/22 12:31**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-2

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:36 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:36 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:36 | 1 |
| m,p-Xylenes | <0.00403 | U | 0.00403 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:36 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:36 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:36 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 22:36* | *1* |
| *1,4-Difluorobenzene (Surr)* | *109* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 22:36* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-2,3

**Date Collected: 03/08/22 12:31**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-2

**Matrix: Solid**

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 23:00 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 23:00 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 23:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *102* | | *70 - 130* | *03/14/22 08:40* | *03/14/22 23:00* | *1* |
| *o-Terphenyl (Surr)* | *101* | | *70 - 130* | *03/14/22 08:40* | *03/14/22 23:00* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **4350** | | 24.9 | | mg/Kg | | | 03/24/22 02:58 | 5 |

## Client Sample ID: S-2,5

**Date Collected: 03/08/22 12:32**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-3

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:57 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:57 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:57 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:57 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:57 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 22:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 22:57* | *1* |
| *1,4-Difluorobenzene (Surr)* | *108* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 22:57* | *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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 23:22 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 23:22 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-2,5

**Date Collected: 03/08/22 12:32**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-3

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oll Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 23:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *111* | | *70 - 130* | *03/14/22 08:40* | *03/14/22 23:22* | *1* |
| *o-Terphenyl (Surr)* | *107* | | *70 - 130* | *03/14/22 08:40* | *03/14/22 23:22* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **3420** | | 25.0 | | mg/Kg | | | 03/24/22 03:07 | 5 |

## Client Sample ID: S-2,10

**Date Collected: 03/08/22 12:33**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-4

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:17 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:17 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:17 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:17 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:17 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:17 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 23:17* | *1* |
| *1,4-Difluorobenzene (Surr)* | *107* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 23:17* | *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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 23:44 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 23:44 | 1 |
| Oll Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 23:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *118* | | *70 - 130* | *03/14/22 08:40* | *03/14/22 23:44* | *1* |
| *o-Terphenyl (Surr)* | *118* | | *70 - 130* | *03/14/22 08:40* | *03/14/22 23:44* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **13.7** | | 5.00 | | mg/Kg | | | 03/24/22 03:34 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-3.1
**Date Collected: 03/08/22 11:05**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-5
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:38 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:38 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:38 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:38 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:38 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 23:38* | *1* |
| *1,4-Difluorobenzene (Surr)* | *109* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 23:38* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 00:03 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 00:03 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 00:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *106* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 00:03* | *1* |
| *o-Terphenyl (Surr)* | *106* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 00:03* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **7370** | | 49.7 | | mg/Kg | | | 03/24/22 03:42 | 10 |

## Client Sample ID: S-3,3
**Date Collected: 03/08/22 11:06**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-6
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:58 | 1 |
| **Toluene** | **0.00310** | | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:58 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:58 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:58 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:58 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 23:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 23:58* | *1* |
| *1,4-Difluorobenzene (Surr)* | *109* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 23:58* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-3,3

**Date Collected: 03/08/22 11:06**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-6

**Matrix: Solid**

### 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 | | | 03/18/22 13:18 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **185** | | 50.0 | | mg/Kg | | | 03/14/22 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 00:23 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **185** | | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 00:23 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 00:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *110* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 00:23* | *1* |
| *o-Terphenyl (Surr)* | *107* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 00:23* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **20700** | | 248 | | mg/Kg | | | 03/24/22 03:51 | 50 |

## Client Sample ID: S-3,5

**Date Collected: 03/08/22 11:07**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-7

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:19 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:19 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:19 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:19 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:19 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *70 - 130* | *03/18/22 08:00* | *03/19/22 00:19* | *1* |
| *1,4-Difluorobenzene (Surr)* | *110* | | *70 - 130* | *03/18/22 08:00* | *03/19/22 00:19* | *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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 00:43 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 00:43 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-3,5

**Date Collected: 03/08/22 11:07**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-7

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oll Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 00:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *105* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 00:43* | *1* |
| *o-Terphenyl (Surr)* | *103* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 00:43* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **4850** | | 50.2 | | mg/Kg | | | 03/24/22 04:00 | 10 |

## Client Sample ID: S-3,10

**Date Collected: 03/08/22 11:08**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-8

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:40 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:40 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:40 | 1 |
| m,p-Xylenes | <0.00397 | U | 0.00397 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:40 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:40 | 1 |
| Xylenes, Total | <0.00397 | U | 0.00397 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 00:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *106* | | *70 - 130* | *03/18/22 08:00* | *03/19/22 00:40* | *1* |
| *1,4-Difluorobenzene (Surr)* | *109* | | *70 - 130* | *03/18/22 08:00* | *03/19/22 00:40* | *1* |

### 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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 01:04 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 01:04 | 1 |
| Oll Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 01:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *109* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 01:04* | *1* |
| *o-Terphenyl (Surr)* | *109* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 01:04* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **3560** | | 24.9 | | mg/Kg | | | 03/24/22 04:09 | 5 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-3,14

**Date Collected: 03/08/22 11:09**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-9

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:00 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:00 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:00 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:00 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:00 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *106* | | *70 - 130* | *03/18/22 08:00* | *03/19/22 01:00* | *1* |
| *1,4-Difluorobenzene (Surr)* | *109* | | *70 - 130* | *03/18/22 08:00* | *03/19/22 01:00* | *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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 01:24 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 01:24 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 01:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *116* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 01:24* | *1* |
| *o-Terphenyl (Surr)* | *117* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 01:24* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **881** | **F1** | 4.99 | | mg/Kg | | | 03/24/22 04:18 | 1 |

## Client Sample ID: S-5,1

**Date Collected: 03/08/22 13:00**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-10

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:21 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:21 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:21 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:21 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:21 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 03/18/22 08:00 | 03/19/22 01:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | *03/18/22 08:00* | *03/19/22 01:21* | *1* |
| *1,4-Difluorobenzene (Surr)* | *105* | | *70 - 130* | *03/18/22 08:00* | *03/19/22 01:21* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-5,1

**Date Collected: 03/08/22 13:00**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-10

**Matrix: Solid**

### 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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 01:44 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 01:44 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 01:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *106* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 01:44* | *1* |
| *o-Terphenyl (Surr)* | *105* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 01:44* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 111 | | 5.00 | | mg/Kg | | | 03/24/22 15:50 | 1 |

## Client Sample ID: S-5,3

**Date Collected: 03/08/22 13:01**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-11

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 12:57 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 12:57 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 12:57 | 1 |
| m,p-Xylenes | <0.00404 | U | 0.00404 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 12:57 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 12:57 | 1 |
| Xylenes, Total | <0.00404 | U | 0.00404 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 12:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 12:57* | *1* |
| *1,4-Difluorobenzene (Surr)* | *110* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 12:57* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | | mg/Kg | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 02:24 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 02:24 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-5,3

**Date Collected: 03/08/22 13:01**
**Date Received: 03/10/22 15:05**

**Lab Sample ID: 880-12315-11**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oll Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 02:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *103* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 02:24* | *1* |
| *o-Terphenyl (Surr)* | *102* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 02:24* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **158** | | 4.95 | | mg/Kg | | | 03/24/22 04:53 | 1 |

## Client Sample ID: S-5,5

**Date Collected: 03/08/22 13:02**
**Date Received: 03/10/22 15:05**

**Lab Sample ID: 880-12315-12**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:18 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:18 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:18 | 1 |
| m,p-Xylenes | <0.00403 | U | 0.00403 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:18 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:18 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:18 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 13:18* | *1* |
| *1,4-Difluorobenzene (Surr)* | *101* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 13:18* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 02:45 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 02:45 | 1 |
| Oll Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 02:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *107* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 02:45* | *1* |
| *o-Terphenyl (Surr)* | *107* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 02:45* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <4.97 | U | 4.97 | | mg/Kg | | | 03/24/22 05:20 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-5,10
**Date Collected: 03/08/22 13:03**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-13
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:38 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:38 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:38 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:38 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:38 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 13:38* | *1* |
| *1,4-Difluorobenzene (Surr)* | *110* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 13:38* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 03:04 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 03:04 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 03:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *103* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 03:04* | *1* |
| *o-Terphenyl (Surr)* | *105* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 03:04* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **11.2** | | 5.04 | | mg/Kg | | | 03/24/22 05:29 | 1 |

## Client Sample ID: S-8,1
**Date Collected: 03/08/22 13:45**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-14
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:59 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:59 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:59 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:59 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:59 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 13:59 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 13:59* | *1* |
| *1,4-Difluorobenzene (Surr)* | *108* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 13:59* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-8,1
**Date Collected: 03/08/22 13:45**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-14
**Matrix: Solid**

### 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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 03:24 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 03:24 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 03:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *111* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 03:24* | *1* |
| *o-Terphenyl (Surr)* | *110* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 03:24* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **822** | | 24.9 | | mg/Kg | | | 03/24/22 05:37 | 5 |

## Client Sample ID: S-8,3
**Date Collected: 03/08/22 13:46**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-15
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:19 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:19 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:19 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:19 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:19 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *106* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 14:19* | *1* |
| *1,4-Difluorobenzene (Surr)* | *111* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 14:19* | *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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 03:44 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 03:44 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-8,3
**Date Collected: 03/08/22 13:46**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-15
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oll Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 03:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *100* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 03:44* | *1* |
| *o-Terphenyl (Surr)* | *100* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 03:44* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **37.6** | | 5.00 | | mg/Kg | | | 03/24/22 05:46 | 1 |

## Client Sample ID: S-8,5
**Date Collected: 03/08/22 13:47**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-16
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:40 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:40 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:40 | 1 |
| m,p-Xylenes | <0.00401 | U | 0.00401 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:40 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:40 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 14:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 14:40* | *1* |
| *1,4-Difluorobenzene (Surr)* | *109* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 14:40* | *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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 04:05 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 04:05 | 1 |
| Oll Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 04:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *109* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 04:05* | *1* |
| *o-Terphenyl (Surr)* | *109* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 04:05* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **16.5** | | 4.98 | | mg/Kg | | | 03/24/22 05:55 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-8,10

**Date Collected: 03/08/22 13:48**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-17

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:00 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:00 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:00 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:00 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:00 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 15:00* | *1* |
| *1,4-Difluorobenzene (Surr)* | *108* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 15:00* | *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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 04:24 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 04:24 | 1 |
| Oil Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 04:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *104* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 04:24* | *1* |
| *o-Terphenyl (Surr)* | *103* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 04:24* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **5.26** | | 4.98 | | mg/Kg | | | 03/24/22 06:04 | 1 |

## Client Sample ID: S-9,0.5

**Date Collected: 03/08/22 10:15**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-18

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:21 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:21 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:21 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:21 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:21 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 15:21* | *1* |
| *1,4-Difluorobenzene (Surr)* | *109* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 15:21* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-9,0.5
**Date Collected: 03/08/22 10:15**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-18
**Matrix: Solid**

### 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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 04:44 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 04:44 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 04:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *104* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 04:44* | *1* |
| *o-Terphenyl (Surr)* | *103* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 04:44* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **327** | | 25.0 | | mg/Kg | | | 03/24/22 15:59 | 5 |

## Client Sample ID: S-9,1
**Date Collected: 03/08/22 10:16**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-19
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:41 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:41 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:41 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:41 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:41 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 15:41 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 15:41* | *1* |
| *1,4-Difluorobenzene (Surr)* | *109* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 15:41* | *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 | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 05:04 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 05:04 | 1 |

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# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-9,1

**Date Collected: 03/08/22 10:16**
**Date Received: 03/10/22 15:05**

**Lab Sample ID: 880-12315-19**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oll Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 05:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *102* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 05:04* | *1* |
| *o-Terphenyl (Surr)* | *100* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 05:04* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **224** | | 25.0 | | mg/Kg | | | 03/23/22 15:32 | 5 |

## Client Sample ID: S-10,0.5

**Date Collected: 03/08/22 10:40**
**Date Received: 03/10/22 15:05**

**Lab Sample ID: 880-12315-20**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 16:02 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 16:02 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 16:02 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 16:02 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 16:02 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 03/19/22 09:25 | 03/19/22 16:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 16:02* | *1* |
| *1,4-Difluorobenzene (Surr)* | *107* | | *70 - 130* | *03/19/22 09:25* | *03/19/22 16:02* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 03/18/22 13:18 | 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 08:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 05:24 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 05:24 | 1 |
| Oll Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/15/22 05:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *109* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 05:24* | *1* |
| *o-Terphenyl (Surr)* | *106* | | *70 - 130* | *03/14/22 08:40* | *03/15/22 05:24* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **349** | | 4.95 | | mg/Kg | | | 03/23/22 15:59 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-10,1
**Date Collected: 03/08/22 10:41**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-21
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 18:14 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 18:14 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 18:14 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 18:14 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 18:14 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 18:14 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *106* | | *70 - 130* | *03/17/22 08:30* | *03/17/22 18:14* | *1* |
| *1,4-Difluorobenzene (Surr)* | *105* | | *70 - 130* | *03/17/22 08:30* | *03/17/22 18:14* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 03/18/22 13:18 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **89.1** | | 50.0 | | mg/Kg | | | 03/14/22 08:40 | 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 | | 03/11/22 09:52 | 03/12/22 08:23 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/11/22 09:52 | 03/12/22 08:23 | 1 |
| **Oil Range Organics (Over C28-C36)** | **89.1** | | 50.0 | | mg/Kg | | 03/11/22 09:52 | 03/12/22 08:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *97* | | *70 - 130* | *03/11/22 09:52* | *03/12/22 08:23* | *1* |
| *o-Terphenyl (Surr)* | *98* | | *70 - 130* | *03/11/22 09:52* | *03/12/22 08:23* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **130** | | 5.04 | | mg/Kg | | | 03/23/22 16:07 | 1 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## 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) |
| 880-12315-1 | S-2,1 | 101 | 107 |
| 880-12315-1 MS | S-2,1 | 105 | 110 |
| 880-12315-1 MSD | S-2,1 | 108 | 113 |
| 880-12315-2 | S-2,3 | 105 | 109 |
| 880-12315-3 | S-2,5 | 105 | 108 |
| 880-12315-4 | S-2,10 | 102 | 107 |
| 880-12315-5 | S-3.1 | 102 | 109 |
| 880-12315-6 | S-3,3 | 104 | 109 |
| 880-12315-7 | S-3,5 | 108 | 110 |
| 880-12315-8 | S-3,10 | 106 | 109 |
| 880-12315-9 | S-3,14 | 106 | 109 |
| 880-12315-10 | S-5,1 | 102 | 105 |
| 880-12315-11 | S-5,3 | 104 | 110 |
| 880-12315-11 MS | S-5,3 | 104 | 111 |
| 880-12315-11 MSD | S-5,3 | 105 | 111 |
| 880-12315-12 | S-5,5 | 105 | 101 |
| 880-12315-13 | S-5,10 | 107 | 110 |
| 880-12315-14 | S-8,1 | 103 | 108 |
| 880-12315-15 | S-8,3 | 106 | 111 |
| 880-12315-16 | S-8,5 | 104 | 109 |
| 880-12315-17 | S-8,10 | 103 | 108 |
| 880-12315-18 | S-9,0.5 | 105 | 109 |
| 880-12315-19 | S-9,1 | 105 | 109 |
| 880-12315-20 | S-10,0.5 | 104 | 107 |
| 880-12315-21 | S-10,1 | 106 | 105 |
| 880-12320-A-3-F MS | Matrix Spike | 112 | 89 |
| 880-12320-A-3-G MSD | Matrix Spike Duplicate | 128 | 97 |
| LCS 880-21697/1-A | Lab Control Sample | 98 | 100 |
| LCS 880-21700/1-A | Lab Control Sample | 101 | 111 |
| LCS 880-21935/1-A | Lab Control Sample | 103 | 111 |
| LCSD 880-21697/2-A | Lab Control Sample Dup | 99 | 100 |
| LCSD 880-21700/2-A | Lab Control Sample Dup | 103 | 111 |
| LCSD 880-21935/2-A | Lab Control Sample Dup | 104 | 112 |
| MB 880-21697/5-A | Method Blank | 97 | 100 |
| MB 880-21700/5-A | Method Blank | 100 | 104 |
| MB 880-21732/5-A | Method Blank | 101 | 104 |
| MB 880-21935/5-A | Method Blank | 104 | 105 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | 1CO1 (70-130) | OTPH1 (70-130) |
| 880-12309-A-1-B MS | Matrix Spike | 106 | 91 |
| 880-12309-A-1-C MSD | Matrix Spike Duplicate | 103 | 89 |

# Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-12315-1
Project/Site: SD 19 CTB Manifold SDG: 22-0105-04

## 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) | | | | | | | | |
| 880-12315-1 | S-2,1 | 104 | 101 | | | | | | | | |
| 880-12315-1 MS | S-2,1 | 97 | 82 | | | | | | | | |
| 880-12315-1 MSD | S-2,1 | 113 | 101 | | | | | | | | |
| 880-12315-2 | S-2,3 | 102 | 101 | | | | | | | | |
| 880-12315-3 | S-2,5 | 111 | 107 | | | | | | | | |
| 880-12315-4 | S-2,10 | 118 | 118 | | | | | | | | |
| 880-12315-5 | S-3.1 | 106 | 106 | | | | | | | | |
| 880-12315-6 | S-3,3 | 110 | 107 | | | | | | | | |
| 880-12315-7 | S-3,5 | 105 | 103 | | | | | | | | |
| 880-12315-8 | S-3,10 | 109 | 109 | | | | | | | | |
| 880-12315-9 | S-3,14 | 116 | 117 | | | | | | | | |
| 880-12315-10 | S-5,1 | 106 | 105 | | | | | | | | |
| 880-12315-11 | S-5,3 | 103 | 102 | | | | | | | | |
| 880-12315-12 | S-5,5 | 107 | 107 | | | | | | | | |
| 880-12315-13 | S-5,10 | 103 | 105 | | | | | | | | |
| 880-12315-14 | S-8,1 | 111 | 110 | | | | | | | | |
| 880-12315-15 | S-8,3 | 100 | 100 | | | | | | | | |
| 880-12315-16 | S-8,5 | 109 | 109 | | | | | | | | |
| 880-12315-17 | S-8,10 | 104 | 103 | | | | | | | | |
| 880-12315-18 | S-9,0.5 | 104 | 103 | | | | | | | | |
| 880-12315-19 | S-9,1 | 102 | 100 | | | | | | | | |
| 880-12315-20 | S-10,0.5 | 109 | 106 | | | | | | | | |
| 880-12315-21 | S-10,1 | 97 | 98 | | | | | | | | |
| LCS 880-21371/2-A | Lab Control Sample | 110 | 97 | | | | | | | | |
| LCS 880-21468/2-A | Lab Control Sample | 123 | 125 | | | | | | | | |
| LCSD 880-21371/3-A | Lab Control Sample Dup | 132 S1+ | 120 | | | | | | | | |
| LCSD 880-21468/3-A | Lab Control Sample Dup | 108 | 114 | | | | | | | | |
| MB 880-21371/1-A | Method Blank | 125 | 126 | | | | | | | | |
| MB 880-21468/1-A | Method Blank | 127 | 132 S1+ | | | | | | | | |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

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

### Lab Sample ID: MB 880-21697/5-A
**Matrix: Solid**
**Analysis Batch: 21774**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 21697**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 12:07 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 12:07 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 12:07 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 12:07 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 12:07 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 03/17/22 08:30 | 03/17/22 12:07 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | *03/17/22 08:30* | *03/17/22 12:07* | *1* |
| *1,4-Difluorobenzene (Surr)* | *100* | | *70 - 130* | *03/17/22 08:30* | *03/17/22 12:07* | *1* |

### Lab Sample ID: LCS 880-21697/1-A
**Matrix: Solid**
**Analysis Batch: 21774**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21697**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.08591 | | mg/Kg | | 86 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.08605 | | mg/Kg | | 86 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.08745 | | mg/Kg | | 87 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.2003 | | mg/Kg | | 100 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1012 | | mg/Kg | | 101 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *100* | | *70 - 130* |

### Lab Sample ID: LCSD 880-21697/2-A
**Matrix: Solid**
**Analysis Batch: 21774**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 21697**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1022 | | mg/Kg | | 102 | 70 - 130 | 17 | 35 |
| Toluene | | | 0.100 | 0.09993 | | mg/Kg | | 100 | 70 - 130 | 15 | 35 |
| Ethylbenzene | | | 0.100 | 0.09959 | | mg/Kg | | 100 | 70 - 130 | 13 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2354 | | mg/Kg | | 118 | 70 - 130 | 16 | 35 |
| o-Xylene | | | 0.100 | 0.1145 | | mg/Kg | | 115 | 70 - 130 | 12 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *100* | | *70 - 130* |

### Lab Sample ID: 880-12320-A-3-F MS
**Matrix: Solid**
**Analysis Batch: 21774**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 21697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.0998 | 0.07400 | | mg/Kg | | 73 | 70 - 130 | | |
| Toluene | <0.00201 | U | 0.0998 | 0.08657 | | mg/Kg | | 85 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

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

**Lab Sample ID: 880-12320-A-3-F MS**
**Matrix: Solid**
**Analysis Batch: 21774**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 21697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | <0.00201 | U | 0.0998 | 0.08452 | | mg/Kg | | 84 | 70 - 130 |
| m,p-Xylenes | <0.00402 | U | 0.200 | 0.2012 | | mg/Kg | | 101 | 70 - 130 |
| o-Xylene | <0.00201 | U | 0.0998 | 0.09510 | | mg/Kg | | 95 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* |

**Lab Sample ID: 880-12320-A-3-G MSD**
**Matrix: Solid**
**Analysis Batch: 21774**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 21697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.101 | 0.08368 | | mg/Kg | | 82 | 70 - 130 | 12 | 35 |
| Toluene | <0.00201 | U | 0.101 | 0.09310 | | mg/Kg | | 91 | 70 - 130 | 7 | 35 |
| Ethylbenzene | <0.00201 | U | 0.101 | 0.09334 | | mg/Kg | | 92 | 70 - 130 | 10 | 35 |
| m,p-Xylenes | <0.00402 | U | 0.202 | 0.2269 | | mg/Kg | | 113 | 70 - 130 | 12 | 35 |
| o-Xylene | <0.00201 | U | 0.101 | 0.1095 | | mg/Kg | | 109 | 70 - 130 | 14 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *128* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *97* | | *70 - 130* |

**Lab Sample ID: MB 880-21700/5-A**
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 21700**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 21:54 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 21:54 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 21:54 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 21:54 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 21:54 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 21:54 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 21:54* | *1* |
| *1,4-Difluorobenzene (Surr)* | *104* | | *70 - 130* | *03/18/22 08:00* | *03/18/22 21:54* | *1* |

**Lab Sample ID: LCS 880-21700/1-A**
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21700**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 0.100 | 0.09804 | | mg/Kg | | 98 | 70 - 130 |
| Toluene | 0.100 | 0.09504 | | mg/Kg | | 95 | 70 - 130 |
| Ethylbenzene | 0.100 | 0.09412 | | mg/Kg | | 94 | 70 - 130 |
| m,p-Xylenes | 0.200 | 0.1934 | | mg/Kg | | 97 | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

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

**Lab Sample ID: LCS 880-21700/1-A**
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21700**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | | | 0.100 | 0.09571 | | mg/Kg | | 96 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *111* | | *70 - 130* |

**Lab Sample ID: LCSD 880-21700/2-A**
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 21700**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09964 | | mg/Kg | | 100 | 70 - 130 | 2 | 35 |
| Toluene | | | 0.100 | 0.09742 | | mg/Kg | | 97 | 70 - 130 | 2 | 35 |
| Ethylbenzene | | | 0.100 | 0.09726 | | mg/Kg | | 97 | 70 - 130 | 3 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2002 | | mg/Kg | | 100 | 70 - 130 | 4 | 35 |
| o-Xylene | | | 0.100 | 0.09908 | | mg/Kg | | 99 | 70 - 130 | 3 | 35 |

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

**Lab Sample ID: 880-12315-1 MS**
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: S-2,1**
**Prep Type: Total/NA**
**Prep Batch: 21700**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.101 | 0.08424 | | mg/Kg | | 84 | 70 - 130 | | |
| Toluene | <0.00200 | U | 0.101 | 0.08230 | | mg/Kg | | 82 | 70 - 130 | | |
| Ethylbenzene | <0.00200 | U | 0.101 | 0.08150 | | mg/Kg | | 81 | 70 - 130 | | |
| m,p-Xylenes | <0.00400 | U | 0.201 | 0.1685 | | mg/Kg | | 84 | 70 - 130 | | |
| o-Xylene | <0.00200 | U | 0.101 | 0.08253 | | mg/Kg | | 82 | 70 - 130 | | |

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

**Lab Sample ID: 880-12315-1 MSD**
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: S-2,1**
**Prep Type: Total/NA**
**Prep Batch: 21700**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.100 | 0.09062 | | mg/Kg | | 90 | 70 - 130 | 7 | 35 |
| Toluene | <0.00200 | U | 0.100 | 0.08739 | | mg/Kg | | 87 | 70 - 130 | 6 | 35 |
| Ethylbenzene | <0.00200 | U | 0.100 | 0.08441 | | mg/Kg | | 84 | 70 - 130 | 4 | 35 |
| m,p-Xylenes | <0.00400 | U | 0.200 | 0.1740 | | mg/Kg | | 87 | 70 - 130 | 3 | 35 |
| o-Xylene | <0.00200 | U | 0.100 | 0.08511 | | mg/Kg | | 85 | 70 - 130 | 3 | 35 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

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

**Lab Sample ID: 880-12315-1 MSD**
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: S-2,1**
**Prep Type: Total/NA**
**Prep Batch: 21700**

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 108 | | 70 - 130 |
| 1,4-Difluorobenzene (Surr) | 113 | | 70 - 130 |

**Lab Sample ID: MB 880-21732/5-A**
**Matrix: Solid**
**Analysis Batch: 21846**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 21732**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 03/18/22 08:00 | 03/18/22 10:33 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 101 | | 70 - 130 | 03/18/22 08:00 | 03/18/22 10:33 | 1 |
| 1,4-Difluorobenzene (Surr) | 104 | | 70 - 130 | 03/18/22 08:00 | 03/18/22 10:33 | 1 |

**Lab Sample ID: MB 880-21935/5-A**
**Matrix: Solid**
**Analysis Batch: 21936**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 21935**

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

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

**Lab Sample ID: LCS 880-21935/1-A**
**Matrix: Solid**
**Analysis Batch: 21936**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21935**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1011 | | mg/Kg | | 101 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1005 | | mg/Kg | | 100 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1025 | | mg/Kg | | 102 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.2105 | | mg/Kg | | 105 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1021 | | mg/Kg | | 102 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

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

**Lab Sample ID: LCS 880-21935/1-A**
**Matrix: Solid**
**Analysis Batch: 21936**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21935**

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

**Lab Sample ID: LCSD 880-21935/2-A**
**Matrix: Solid**
**Analysis Batch: 21936**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 21935**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1095 | | mg/Kg | | 109 | 70 - 130 | 8 | 35 |
| Toluene | | | 0.100 | 0.1081 | | mg/Kg | | 108 | 70 - 130 | 7 | 35 |
| Ethylbenzene | | | 0.100 | 0.1096 | | mg/Kg | | 110 | 70 - 130 | 7 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2259 | | mg/Kg | | 113 | 70 - 130 | 7 | 35 |
| o-Xylene | | | 0.100 | 0.1096 | | mg/Kg | | 110 | 70 - 130 | 7 | 35 |

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

**Lab Sample ID: 880-12315-11 MS**
**Matrix: Solid**
**Analysis Batch: 21936**

**Client Sample ID: S-5,3**
**Prep Type: Total/NA**
**Prep Batch: 21935**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.100 | 0.08164 | | mg/Kg | | 81 | 70 - 130 |
| Toluene | <0.00202 | U | 0.100 | 0.07915 | | mg/Kg | | 79 | 70 - 130 |
| Ethylbenzene | <0.00202 | U | 0.100 | 0.07729 | | mg/Kg | | 77 | 70 - 130 |
| m,p-Xylenes | <0.00404 | U | 0.200 | 0.1611 | | mg/Kg | | 80 | 70 - 130 |
| o-Xylene | <0.00202 | U | 0.100 | 0.07937 | | mg/Kg | | 79 | 70 - 130 |

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

**Lab Sample ID: 880-12315-11 MSD**
**Matrix: Solid**
**Analysis Batch: 21936**

**Client Sample ID: S-5,3**
**Prep Type: Total/NA**
**Prep Batch: 21935**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.100 | 0.08491 | | mg/Kg | | 85 | 70 - 130 | 4 | 35 |
| Toluene | <0.00202 | U | 0.100 | 0.08152 | | mg/Kg | | 81 | 70 - 130 | 3 | 35 |
| Ethylbenzene | <0.00202 | U | 0.100 | 0.08010 | | mg/Kg | | 80 | 70 - 130 | 4 | 35 |
| m,p-Xylenes | <0.00404 | U | 0.200 | 0.1651 | | mg/Kg | | 82 | 70 - 130 | 2 | 35 |
| o-Xylene | <0.00202 | U | 0.100 | 0.08108 | | mg/Kg | | 81 | 70 - 130 | 2 | 35 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 105 | | 70 - 130 |
| 1,4-Difluorobenzene (Surr) | 111 | | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

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

**Lab Sample ID: MB 880-21371/1-A**
**Matrix: Solid**
**Analysis Batch: 21357**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 21371**

| 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 | | 03/11/22 09:52 | 03/12/22 05:08 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/11/22 09:52 | 03/12/22 05:08 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/11/22 09:52 | 03/12/22 05:08 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *125* | | *70 - 130* | *03/11/22 09:52* | *03/12/22 05:08* | *1* |
| *o-Terphenyl (Surr)* | *126* | | *70 - 130* | *03/11/22 09:52* | *03/12/22 05:08* | *1* |

**Lab Sample ID: LCS 880-21371/2-A**
**Matrix: Solid**
**Analysis Batch: 21357**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21371**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 848.4 | | mg/Kg | | 85 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1009 | | mg/Kg | | 101 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *110* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *97* | | *70 - 130* |

**Lab Sample ID: LCSD 880-21371/3-A**
**Matrix: Solid**
**Analysis Batch: 21357**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 21371**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 955.3 | | mg/Kg | | 96 | 70 - 130 | 12 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1220 | | mg/Kg | | 122 | 70 - 130 | 19 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *132* | *S1+* | *70 - 130* |
| *o-Terphenyl (Surr)* | *120* | | *70 - 130* |

**Lab Sample ID: 880-12309-A-1-B MS**
**Matrix: Solid**
**Analysis Batch: 21357**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 21371**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U F1 | 998 | 1444 | F1 | mg/Kg | | 141 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | <49.8 | U F1 | 998 | 1460 | F1 | mg/Kg | | 146 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

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

**Lab Sample ID: 880-12309-A-1-B MS**
**Matrix: Solid**
**Analysis Batch: 21357**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 21371**

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 106 | | 70 - 130 |
| o-Terphenyl (Surr) | 91 | | 70 - 130 |

**Lab Sample ID: 880-12309-A-1-C MSD**
**Matrix: Solid**
**Analysis Batch: 21357**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 21371**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U F1 | 998 | 1422 | F1 | mg/Kg | | 139 | 70 - 130 | 2 | 20 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U F1 | 998 | 1426 | F1 | mg/Kg | | 143 | 70 - 130 | 2 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 103 | | 70 - 130 |
| o-Terphenyl (Surr) | 89 | | 70 - 130 |

**Lab Sample ID: MB 880-21468/1-A**
**Matrix: Solid**
**Analysis Batch: 21456**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 21468**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 20:54 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 20:54 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 03/14/22 08:40 | 03/14/22 20:54 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1-Chlorooctane (Surr) | 127 | | 70 - 130 | 03/14/22 08:40 | 03/14/22 20:54 | 1 |
| o-Terphenyl (Surr) | 132 | S1+ | 70 - 130 | 03/14/22 08:40 | 03/14/22 20:54 | 1 |

**Lab Sample ID: LCS 880-21468/2-A**
**Matrix: Solid**
**Analysis Batch: 21456**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 21468**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 959.2 | | mg/Kg | | 96 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1105 | | mg/Kg | | 111 | 70 - 130 | | |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 123 | | 70 - 130 |
| o-Terphenyl (Surr) | 125 | | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

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

**Lab Sample ID: LCSD 880-21468/3-A**
**Matrix: Solid**
**Analysis Batch: 21456**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 21468**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 851.8 | | mg/Kg | | 85 | 70 - 130 | 12 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1095 | | mg/Kg | | 109 | 70 - 130 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *108* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *114* | | *70 - 130* |

**Lab Sample ID: 880-12315-1 MS**
**Matrix: Solid**
**Analysis Batch: 21456**

**Client Sample ID: S-2,1**
**Prep Type: Total/NA**
**Prep Batch: 21468**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 998 | 1101 | | mg/Kg | | 110 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 998 | 987.0 | | mg/Kg | | 99 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *97* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *82* | | *70 - 130* |

**Lab Sample ID: 880-12315-1 MSD**
**Matrix: Solid**
**Analysis Batch: 21456**

**Client Sample ID: S-2,1**
**Prep Type: Total/NA**
**Prep Batch: 21468**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 998 | 1185 | | mg/Kg | | 119 | 70 - 130 | 7 | 20 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 998 | 1196 | | mg/Kg | | 120 | 70 - 130 | 19 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *113* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *101* | | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-21602/1-A**
**Matrix: Solid**
**Analysis Batch: 22052**

**Client Sample ID: Method Blank**
**Prep Type: Soluble**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 03/24/22 01:47 | 1 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 880-21602/2-A**
**Matrix: Solid**
**Analysis Batch: 22052**

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

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

**Lab Sample ID: LCSD 880-21602/3-A**
**Matrix: Solid**
**Analysis Batch: 22052**

**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 | 272.8 | | mg/Kg | | 109 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 880-12315-9 MS**
**Matrix: Solid**
**Analysis Batch: 22052**

**Client Sample ID: S-3,14**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 881 | F1 | 250 | 1102 | F1 | mg/Kg | | 88 | 90 - 110 | | |

**Lab Sample ID: 880-12315-9 MSD**
**Matrix: Solid**
**Analysis Batch: 22052**

**Client Sample ID: S-3,14**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 881 | F1 | 250 | 1118 | | mg/Kg | | 95 | 90 - 110 | 1 | 20 |

**Lab Sample ID: MB 880-22210/1-A**
**Matrix: Solid**
**Analysis Batch: 22211**

**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 | | | 03/23/22 14:12 | 1 |

**Lab Sample ID: LCS 880-22210/2-A**
**Matrix: Solid**
**Analysis Batch: 22211**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 268.8 | | mg/Kg | | 108 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-22210/3-A**
**Matrix: Solid**
**Analysis Batch: 22211**

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

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 270.3 | | mg/Kg | | 108 | 90 - 110 | 1 | 20 |

**Lab Sample ID: 880-12712-A-1-F MS**
**Matrix: Solid**
**Analysis Batch: 22211**

**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 | 1500 | | 1250 | 2878 | | mg/Kg | | 110 | 90 - 110 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: 880-12712-A-1-G MSD**
**Matrix: Solid**
**Analysis Batch: 22211**

**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 | 1500 | | 1250 | 2877 | | mg/Kg | | 110 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 890-2112-A-3-H MS**
**Matrix: Solid**
**Analysis Batch: 22211**

**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 | 7.48 | F1 | 249 | 286.4 | F1 | mg/Kg | | 112 | 90 - 110 |

**Lab Sample ID: 890-2112-A-3-I MSD**
**Matrix: Solid**
**Analysis Batch: 22211**

**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 | 7.48 | F1 | 249 | 287.5 | F1 | mg/Kg | | 113 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## GC VOA

### Prep Batch: 21697

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-21 | S-10,1 | Total/NA | Solid | 5035 | |
| MB 880-21697/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-21697/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-21697/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-12320-A-3-F MS | Matrix Spike | Total/NA | Solid | 5035 | |
| 880-12320-A-3-G MSD | Matrix Spike Duplicate | Total/NA | Solid | 5035 | |

### Prep Batch: 21700

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-1 | S-2,1 | Total/NA | Solid | 5035 | |
| 880-12315-2 | S-2,3 | Total/NA | Solid | 5035 | |
| 880-12315-3 | S-2,5 | Total/NA | Solid | 5035 | |
| 880-12315-4 | S-2,10 | Total/NA | Solid | 5035 | |
| 880-12315-5 | S-3.1 | Total/NA | Solid | 5035 | |
| 880-12315-6 | S-3,3 | Total/NA | Solid | 5035 | |
| 880-12315-7 | S-3,5 | Total/NA | Solid | 5035 | |
| 880-12315-8 | S-3,10 | Total/NA | Solid | 5035 | |
| 880-12315-9 | S-3,14 | Total/NA | Solid | 5035 | |
| 880-12315-10 | S-5,1 | Total/NA | Solid | 5035 | |
| MB 880-21700/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-21700/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-21700/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-12315-1 MS | S-2,1 | Total/NA | Solid | 5035 | |
| 880-12315-1 MSD | S-2,1 | Total/NA | Solid | 5035 | |

### Prep Batch: 21732

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-21732/5-A | Method Blank | Total/NA | Solid | 5035 | |

### Analysis Batch: 21774

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-21 | S-10,1 | Total/NA | Solid | 8021B | 21697 |
| MB 880-21697/5-A | Method Blank | Total/NA | Solid | 8021B | 21697 |
| LCS 880-21697/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 21697 |
| LCSD 880-21697/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 21697 |
| 880-12320-A-3-F MS | Matrix Spike | Total/NA | Solid | 8021B | 21697 |
| 880-12320-A-3-G MSD | Matrix Spike Duplicate | Total/NA | Solid | 8021B | 21697 |

### Analysis Batch: 21846

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-1 | S-2,1 | Total/NA | Solid | 8021B | 21700 |
| 880-12315-2 | S-2,3 | Total/NA | Solid | 8021B | 21700 |
| 880-12315-3 | S-2,5 | Total/NA | Solid | 8021B | 21700 |
| 880-12315-4 | S-2,10 | Total/NA | Solid | 8021B | 21700 |
| 880-12315-5 | S-3.1 | Total/NA | Solid | 8021B | 21700 |
| 880-12315-6 | S-3,3 | Total/NA | Solid | 8021B | 21700 |
| 880-12315-7 | S-3,5 | Total/NA | Solid | 8021B | 21700 |
| 880-12315-8 | S-3,10 | Total/NA | Solid | 8021B | 21700 |
| 880-12315-9 | S-3,14 | Total/NA | Solid | 8021B | 21700 |
| 880-12315-10 | S-5,1 | Total/NA | Solid | 8021B | 21700 |
| MB 880-21700/5-A | Method Blank | Total/NA | Solid | 8021B | 21700 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## GC VOA (Continued)

### Analysis Batch: 21846 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-21732/5-A | Method Blank | Total/NA | Solid | 8021B | 21732 |
| LCS 880-21700/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 21700 |
| LCSD 880-21700/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 21700 |
| 880-12315-1 MS | S-2,1 | Total/NA | Solid | 8021B | 21700 |
| 880-12315-1 MSD | S-2,1 | Total/NA | Solid | 8021B | 21700 |

### Analysis Batch: 21900

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-1 | S-2,1 | Total/NA | Solid | Total BTEX | |
| 880-12315-2 | S-2,3 | Total/NA | Solid | Total BTEX | |
| 880-12315-3 | S-2,5 | Total/NA | Solid | Total BTEX | |
| 880-12315-4 | S-2,10 | Total/NA | Solid | Total BTEX | |
| 880-12315-5 | S-3.1 | Total/NA | Solid | Total BTEX | |
| 880-12315-6 | S-3,3 | Total/NA | Solid | Total BTEX | |
| 880-12315-7 | S-3,5 | Total/NA | Solid | Total BTEX | |
| 880-12315-8 | S-3,10 | Total/NA | Solid | Total BTEX | |
| 880-12315-9 | S-3,14 | Total/NA | Solid | Total BTEX | |
| 880-12315-10 | S-5,1 | Total/NA | Solid | Total BTEX | |
| 880-12315-11 | S-5,3 | Total/NA | Solid | Total BTEX | |
| 880-12315-12 | S-5,5 | Total/NA | Solid | Total BTEX | |
| 880-12315-13 | S-5,10 | Total/NA | Solid | Total BTEX | |
| 880-12315-14 | S-8,1 | Total/NA | Solid | Total BTEX | |
| 880-12315-15 | S-8,3 | Total/NA | Solid | Total BTEX | |
| 880-12315-16 | S-8,5 | Total/NA | Solid | Total BTEX | |
| 880-12315-17 | S-8,10 | Total/NA | Solid | Total BTEX | |
| 880-12315-18 | S-9,0.5 | Total/NA | Solid | Total BTEX | |
| 880-12315-19 | S-9,1 | Total/NA | Solid | Total BTEX | |
| 880-12315-20 | S-10,0.5 | Total/NA | Solid | Total BTEX | |
| 880-12315-21 | S-10,1 | Total/NA | Solid | Total BTEX | |

### Prep Batch: 21935

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-11 | S-5,3 | Total/NA | Solid | 5035 | |
| 880-12315-12 | S-5,5 | Total/NA | Solid | 5035 | |
| 880-12315-13 | S-5,10 | Total/NA | Solid | 5035 | |
| 880-12315-14 | S-8,1 | Total/NA | Solid | 5035 | |
| 880-12315-15 | S-8,3 | Total/NA | Solid | 5035 | |
| 880-12315-16 | S-8,5 | Total/NA | Solid | 5035 | |
| 880-12315-17 | S-8,10 | Total/NA | Solid | 5035 | |
| 880-12315-18 | S-9,0.5 | Total/NA | Solid | 5035 | |
| 880-12315-19 | S-9,1 | Total/NA | Solid | 5035 | |
| 880-12315-20 | S-10,0.5 | Total/NA | Solid | 5035 | |
| MB 880-21935/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-21935/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-21935/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-12315-11 MS | S-5,3 | Total/NA | Solid | 5035 | |
| 880-12315-11 MSD | S-5,3 | Total/NA | Solid | 5035 | |

### Analysis Batch: 21936

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-11 | S-5,3 | Total/NA | Solid | 8021B | 21935 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## GC VOA (Continued)

### Analysis Batch: 21936 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-12 | S-5,5 | Total/NA | Solid | 8021B | 21935 |
| 880-12315-13 | S-5,10 | Total/NA | Solid | 8021B | 21935 |
| 880-12315-14 | S-8,1 | Total/NA | Solid | 8021B | 21935 |
| 880-12315-15 | S-8,3 | Total/NA | Solid | 8021B | 21935 |
| 880-12315-16 | S-8,5 | Total/NA | Solid | 8021B | 21935 |
| 880-12315-17 | S-8,10 | Total/NA | Solid | 8021B | 21935 |
| 880-12315-18 | S-9,0.5 | Total/NA | Solid | 8021B | 21935 |
| 880-12315-19 | S-9,1 | Total/NA | Solid | 8021B | 21935 |
| 880-12315-20 | S-10,0.5 | Total/NA | Solid | 8021B | 21935 |
| MB 880-21935/5-A | Method Blank | Total/NA | Solid | 8021B | 21935 |
| LCS 880-21935/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 21935 |
| LCSD 880-21935/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 21935 |
| 880-12315-11 MS | S-5,3 | Total/NA | Solid | 8021B | 21935 |
| 880-12315-11 MSD | S-5,3 | Total/NA | Solid | 8021B | 21935 |

## GC Semi VOA

### Analysis Batch: 21357

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-21 | S-10,1 | Total/NA | Solid | 8015B NM | 21371 |
| MB 880-21371/1-A | Method Blank | Total/NA | Solid | 8015B NM | 21371 |
| LCS 880-21371/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 21371 |
| LCSD 880-21371/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 21371 |
| 880-12309-A-1-B MS | Matrix Spike | Total/NA | Solid | 8015B NM | 21371 |
| 880-12309-A-1-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 21371 |

### Prep Batch: 21371

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-21 | S-10,1 | Total/NA | Solid | 8015NM Prep | |
| MB 880-21371/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-21371/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-21371/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-12309-A-1-B MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-12309-A-1-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 21456

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-1 | S-2,1 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-2 | S-2,3 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-3 | S-2,5 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-4 | S-2,10 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-5 | S-3.1 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-6 | S-3,3 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-7 | S-3,5 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-8 | S-3,10 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-9 | S-3,14 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-10 | S-5,1 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-11 | S-5,3 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-12 | S-5,5 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-13 | S-5,10 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-14 | S-8,1 | Total/NA | Solid | 8015B NM | 21468 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## GC Semi VOA (Continued)

### Analysis Batch: 21456 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-15 | S-8,3 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-16 | S-8,5 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-17 | S-8,10 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-18 | S-9,0.5 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-19 | S-9,1 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-20 | S-10,0.5 | Total/NA | Solid | 8015B NM | 21468 |
| MB 880-21468/1-A | Method Blank | Total/NA | Solid | 8015B NM | 21468 |
| LCS 880-21468/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 21468 |
| LCSD 880-21468/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-1 MS | S-2,1 | Total/NA | Solid | 8015B NM | 21468 |
| 880-12315-1 MSD | S-2,1 | Total/NA | Solid | 8015B NM | 21468 |

### Prep Batch: 21468

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-1 | S-2,1 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-2 | S-2,3 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-3 | S-2,5 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-4 | S-2,10 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-5 | S-3.1 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-6 | S-3,3 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-7 | S-3,5 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-8 | S-3,10 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-9 | S-3,14 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-10 | S-5,1 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-11 | S-5,3 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-12 | S-5,5 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-13 | S-5,10 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-14 | S-8,1 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-15 | S-8,3 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-16 | S-8,5 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-17 | S-8,10 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-18 | S-9,0.5 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-19 | S-9,1 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-20 | S-10,0.5 | Total/NA | Solid | 8015NM Prep | |
| MB 880-21468/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-21468/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-21468/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-12315-1 MS | S-2,1 | Total/NA | Solid | 8015NM Prep | |
| 880-12315-1 MSD | S-2,1 | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 21472

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-1 | S-2,1 | Total/NA | Solid | 8015 NM | |
| 880-12315-2 | S-2,3 | Total/NA | Solid | 8015 NM | |
| 880-12315-3 | S-2,5 | Total/NA | Solid | 8015 NM | |
| 880-12315-4 | S-2,10 | Total/NA | Solid | 8015 NM | |
| 880-12315-5 | S-3.1 | Total/NA | Solid | 8015 NM | |
| 880-12315-6 | S-3,3 | Total/NA | Solid | 8015 NM | |
| 880-12315-7 | S-3,5 | Total/NA | Solid | 8015 NM | |
| 880-12315-8 | S-3,10 | Total/NA | Solid | 8015 NM | |
| 880-12315-9 | S-3,14 | Total/NA | Solid | 8015 NM | |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## GC Semi VOA (Continued)

### Analysis Batch: 21472 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-10 | S-5,1 | Total/NA | Solid | 8015 NM | |
| 880-12315-11 | S-5,3 | Total/NA | Solid | 8015 NM | |
| 880-12315-12 | S-5,5 | Total/NA | Solid | 8015 NM | |
| 880-12315-13 | S-5,10 | Total/NA | Solid | 8015 NM | |
| 880-12315-14 | S-8,1 | Total/NA | Solid | 8015 NM | |
| 880-12315-15 | S-8,3 | Total/NA | Solid | 8015 NM | |
| 880-12315-16 | S-8,5 | Total/NA | Solid | 8015 NM | |
| 880-12315-17 | S-8,10 | Total/NA | Solid | 8015 NM | |
| 880-12315-18 | S-9,0.5 | Total/NA | Solid | 8015 NM | |
| 880-12315-19 | S-9,1 | Total/NA | Solid | 8015 NM | |
| 880-12315-20 | S-10,0.5 | Total/NA | Solid | 8015 NM | |
| 880-12315-21 | S-10,1 | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 21602

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-1 | S-2,1 | Soluble | Solid | DI Leach | |
| 880-12315-2 | S-2,3 | Soluble | Solid | DI Leach | |
| 880-12315-3 | S-2,5 | Soluble | Solid | DI Leach | |
| 880-12315-4 | S-2,10 | Soluble | Solid | DI Leach | |
| 880-12315-5 | S-3.1 | Soluble | Solid | DI Leach | |
| 880-12315-6 | S-3,3 | Soluble | Solid | DI Leach | |
| 880-12315-7 | S-3,5 | Soluble | Solid | DI Leach | |
| 880-12315-8 | S-3,10 | Soluble | Solid | DI Leach | |
| 880-12315-9 | S-3,14 | Soluble | Solid | DI Leach | |
| 880-12315-10 | S-5,1 | Soluble | Solid | DI Leach | |
| 880-12315-11 | S-5,3 | Soluble | Solid | DI Leach | |
| 880-12315-12 | S-5,5 | Soluble | Solid | DI Leach | |
| 880-12315-13 | S-5,10 | Soluble | Solid | DI Leach | |
| 880-12315-14 | S-8,1 | Soluble | Solid | DI Leach | |
| 880-12315-15 | S-8,3 | Soluble | Solid | DI Leach | |
| 880-12315-16 | S-8,5 | Soluble | Solid | DI Leach | |
| 880-12315-17 | S-8,10 | Soluble | Solid | DI Leach | |
| 880-12315-18 | S-9,0.5 | Soluble | Solid | DI Leach | |
| MB 880-21602/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-21602/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-21602/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-12315-9 MS | S-3,14 | Soluble | Solid | DI Leach | |
| 880-12315-9 MSD | S-3,14 | Soluble | Solid | DI Leach | |

### Analysis Batch: 22052

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-1 | S-2,1 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-2 | S-2,3 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-3 | S-2,5 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-4 | S-2,10 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-5 | S-3.1 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-6 | S-3,3 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-7 | S-3,5 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-8 | S-3,10 | Soluble | Solid | 300.0 | 21602 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## HPLC/IC (Continued)

### Analysis Batch: 22052 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-9 | S-3,14 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-10 | S-5,1 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-11 | S-5,3 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-12 | S-5,5 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-13 | S-5,10 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-14 | S-8,1 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-15 | S-8,3 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-16 | S-8,5 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-17 | S-8,10 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-18 | S-9,0.5 | Soluble | Solid | 300.0 | 21602 |
| MB 880-21602/1-A | Method Blank | Soluble | Solid | 300.0 | 21602 |
| LCS 880-21602/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 21602 |
| LCSD 880-21602/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 21602 |
| 880-12315-9 MS | S-3,14 | Soluble | Solid | 300.0 | 21602 |
| 880-12315-9 MSD | S-3,14 | Soluble | Solid | 300.0 | 21602 |

### Leach Batch: 22210

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-19 | S-9,1 | Soluble | Solid | DI Leach | |
| 880-12315-20 | S-10,0.5 | Soluble | Solid | DI Leach | |
| 880-12315-21 | S-10,1 | Soluble | Solid | DI Leach | |
| MB 880-22210/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-22210/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-22210/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-12712-A-1-F MS | Matrix Spike | Soluble | Solid | DI Leach | |
| 880-12712-A-1-G MSD | Matrix Spike Duplicate | Soluble | Solid | DI Leach | |
| 890-2112-A-3-H MS | Matrix Spike | Soluble | Solid | DI Leach | |
| 890-2112-A-3-I MSD | Matrix Spike Duplicate | Soluble | Solid | DI Leach | |

### Analysis Batch: 22211

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-12315-19 | S-9,1 | Soluble | Solid | 300.0 | 22210 |
| 880-12315-20 | S-10,0.5 | Soluble | Solid | 300.0 | 22210 |
| 880-12315-21 | S-10,1 | Soluble | Solid | 300.0 | 22210 |
| MB 880-22210/1-A | Method Blank | Soluble | Solid | 300.0 | 22210 |
| LCS 880-22210/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 22210 |
| LCSD 880-22210/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 22210 |
| 880-12712-A-1-F MS | Matrix Spike | Soluble | Solid | 300.0 | 22210 |
| 880-12712-A-1-G MSD | Matrix Spike Duplicate | Soluble | Solid | 300.0 | 22210 |
| 890-2112-A-3-H MS | Matrix Spike | Soluble | Solid | 300.0 | 22210 |
| 890-2112-A-3-I MSD | Matrix Spike Duplicate | Soluble | Solid | 300.0 | 22210 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-2,1
**Date Collected: 03/08/22 12:30**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-1
**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 | | | 5.00 g | 5 mL | 21700 | 03/18/22 08:00 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21846 | 03/18/22 22:15 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.05 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/14/22 21:56 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 10 | | | 22052 | 03/24/22 02:49 | SC | XEN MID |

## Client Sample ID: S-2,3
**Date Collected: 03/08/22 12:31**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-2
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 21700 | 03/18/22 08:00 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21846 | 03/18/22 22:36 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/14/22 23:00 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 22052 | 03/24/22 02:58 | SC | XEN MID |

## Client Sample ID: S-2,5
**Date Collected: 03/08/22 12:32**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-3
**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 | | | 5.02 g | 5 mL | 21700 | 03/18/22 08:00 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21846 | 03/18/22 22:57 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/14/22 23:22 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 22052 | 03/24/22 03:07 | SC | XEN MID |

## Client Sample ID: S-2,10
**Date Collected: 03/08/22 12:33**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-4
**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 | 21700 | 03/18/22 08:00 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21846 | 03/18/22 23:17 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |

Eurofins Midland

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-2,10
**Date Collected: 03/08/22 12:33**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-4
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/14/22 23:44 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22052 | 03/24/22 03:34 | SC | XEN MID |

## Client Sample ID: S-3.1
**Date Collected: 03/08/22 11:05**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-5
**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 | 21700 | 03/18/22 08:00 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21846 | 03/18/22 23:38 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 00:03 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 10 | | | 22052 | 03/24/22 03:42 | SC | XEN MID |

## Client Sample ID: S-3,3
**Date Collected: 03/08/22 11:06**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-6
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 21700 | 03/18/22 08:00 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21846 | 03/18/22 23:58 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 00:23 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 50 | | | 22052 | 03/24/22 03:51 | SC | XEN MID |

## Client Sample ID: S-3,5
**Date Collected: 03/08/22 11:07**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-7
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 21700 | 03/18/22 08:00 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21846 | 03/19/22 00:19 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 00:43 | AJ | XEN MID |

Eurofins Midland

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-3,5
**Date Collected: 03/08/22 11:07**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-7
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 10 | | | 22052 | 03/24/22 04:00 | SC | XEN MID |

## Client Sample ID: S-3,10
**Date Collected: 03/08/22 11:08**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-8
**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 | | | 5.04 g | 5 mL | 21700 | 03/18/22 08:00 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21846 | 03/19/22 00:40 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 01:04 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 22052 | 03/24/22 04:09 | SC | XEN MID |

## Client Sample ID: S-3,14
**Date Collected: 03/08/22 11:09**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-9
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.02 g | 5 mL | 21700 | 03/18/22 08:00 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21846 | 03/19/22 01:00 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 01:24 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22052 | 03/24/22 04:18 | SC | XEN MID |

## Client Sample ID: S-5,1
**Date Collected: 03/08/22 13:00**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-10
**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 | | | 4.98 g | 5 mL | 21700 | 03/18/22 08:00 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21846 | 03/19/22 01:21 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 01:44 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22052 | 03/24/22 15:50 | SC | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-5,3

**Date Collected: 03/08/22 13:01**
**Date Received: 03/10/22 15:05**

**Lab Sample ID: 880-12315-11**
**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 | 21935 | 03/19/22 09:25 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21936 | 03/19/22 12:57 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 02:24 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22052 | 03/24/22 04:53 | SC | XEN MID |

## Client Sample ID: S-5,5

**Date Collected: 03/08/22 13:02**
**Date Received: 03/10/22 15:05**

**Lab Sample ID: 880-12315-12**
**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 | 21935 | 03/19/22 09:25 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21936 | 03/19/22 13:18 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 02:45 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22052 | 03/24/22 05:20 | SC | XEN MID |

## Client Sample ID: S-5,10

**Date Collected: 03/08/22 13:03**
**Date Received: 03/10/22 15:05**

**Lab Sample ID: 880-12315-13**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 21935 | 03/19/22 09:25 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21936 | 03/19/22 13:38 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 03:04 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22052 | 03/24/22 05:29 | SC | XEN MID |

## Client Sample ID: S-8,1

**Date Collected: 03/08/22 13:45**
**Date Received: 03/10/22 15:05**

**Lab Sample ID: 880-12315-14**
**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 | 21935 | 03/19/22 09:25 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21936 | 03/19/22 13:59 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-8,1
**Date Collected: 03/08/22 13:45**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-14
**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 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 03:24 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 22052 | 03/24/22 05:37 | SC | XEN MID |

## Client Sample ID: S-8,3
**Date Collected: 03/08/22 13:46**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-15
**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 | 21935 | 03/19/22 09:25 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21936 | 03/19/22 14:19 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 03:44 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22052 | 03/24/22 05:46 | SC | XEN MID |

## Client Sample ID: S-8,5
**Date Collected: 03/08/22 13:47**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-16
**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 | 21935 | 03/19/22 09:25 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21936 | 03/19/22 14:40 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 04:05 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22052 | 03/24/22 05:55 | SC | XEN MID |

## Client Sample ID: S-8,10
**Date Collected: 03/08/22 13:48**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-17
**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 | 21935 | 03/19/22 09:25 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21936 | 03/19/22 15:00 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 04:24 | AJ | XEN MID |

Eurofins Midland

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-8,10
**Date Collected: 03/08/22 13:48**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-17
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22052 | 03/24/22 06:04 | SC | XEN MID |

## Client Sample ID: S-9,0.5
**Date Collected: 03/08/22 10:15**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-18
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 21935 | 03/19/22 09:25 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21936 | 03/19/22 15:21 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 04:44 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 21602 | 03/15/22 08:33 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 22052 | 03/24/22 15:59 | SC | XEN MID |

## Client Sample ID: S-9,1
**Date Collected: 03/08/22 10:16**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-19
**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 | 21935 | 03/19/22 09:25 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21936 | 03/19/22 15:41 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 05:04 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 22210 | 03/23/22 13:49 | SC | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 22211 | 03/23/22 15:32 | SC | XEN MID |

## Client Sample ID: S-10,0.5
**Date Collected: 03/08/22 10:40**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-20
**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 | 21935 | 03/19/22 09:25 | KL | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21936 | 03/19/22 16:02 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 21468 | 03/14/22 08:40 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21456 | 03/15/22 05:24 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 22210 | 03/23/22 13:49 | SC | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22211 | 03/23/22 15:59 | SC | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## Client Sample ID: S-10,1
**Date Collected: 03/08/22 10:41**
**Date Received: 03/10/22 15:05**

## Lab Sample ID: 880-12315-21
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 21697 | 03/17/22 08:30 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 21774 | 03/17/22 18:14 | KL | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 21900 | 03/18/22 13:18 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 21472 | 03/14/22 08:40 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 21371 | 03/11/22 09:52 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 21357 | 03/12/22 08:23 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 22210 | 03/23/22 13:49 | SC | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 22211 | 03/23/22 16:07 | SC | 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: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

## 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: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

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

**Protocol References:**

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-12315-1
SDG: 22-0105-04

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-12315-1 | S-2,1 | Solid | 03/08/22 12:30 | 03/10/22 15:05 |
| 880-12315-2 | S-2,3 | Solid | 03/08/22 12:31 | 03/10/22 15:05 |
| 880-12315-3 | S-2,5 | Solid | 03/08/22 12:32 | 03/10/22 15:05 |
| 880-12315-4 | S-2,10 | Solid | 03/08/22 12:33 | 03/10/22 15:05 |
| 880-12315-5 | S-3.1 | Solid | 03/08/22 11:05 | 03/10/22 15:05 |
| 880-12315-6 | S-3,3 | Solid | 03/08/22 11:06 | 03/10/22 15:05 |
| 880-12315-7 | S-3,5 | Solid | 03/08/22 11:07 | 03/10/22 15:05 |
| 880-12315-8 | S-3,10 | Solid | 03/08/22 11:08 | 03/10/22 15:05 |
| 880-12315-9 | S-3,14 | Solid | 03/08/22 11:09 | 03/10/22 15:05 |
| 880-12315-10 | S-5,1 | Solid | 03/08/22 13:00 | 03/10/22 15:05 |
| 880-12315-11 | S-5,3 | Solid | 03/08/22 13:01 | 03/10/22 15:05 |
| 880-12315-12 | S-5,5 | Solid | 03/08/22 13:02 | 03/10/22 15:05 |
| 880-12315-13 | S-5,10 | Solid | 03/08/22 13:03 | 03/10/22 15:05 |
| 880-12315-14 | S-8,1 | Solid | 03/08/22 13:45 | 03/10/22 15:05 |
| 880-12315-15 | S-8,3 | Solid | 03/08/22 13:46 | 03/10/22 15:05 |
| 880-12315-16 | S-8,5 | Solid | 03/08/22 13:47 | 03/10/22 15:05 |
| 880-12315-17 | S-8,10 | Solid | 03/08/22 13:48 | 03/10/22 15:05 |
| 880-12315-18 | S-9,0.5 | Solid | 03/08/22 10:15 | 03/10/22 15:05 |
| 880-12315-19 | S-9,1 | Solid | 03/08/22 10:16 | 03/10/22 15:05 |
| 880-12315-20 | S-10,0.5 | Solid | 03/08/22 10:40 | 03/10/22 15:05 |
| 880-12315-21 | S-10,1 | Solid | 03/08/22 10:41 | 03/10/22 15:05 |

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No. 2459

12315

# CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N Marienfeld, Ste 202
Midland, TX 79701
432-687-0901

Data Reported to

DATE: 3/10/2022 PAGE 1 OF 2

PO#: LAB WORK ORDER#

PROJECT LOCATION OR NAME SD 19 CTB Manifold

LAI PROJECT #: 22-0105-04 COLLECTOR: TP & OR

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE
Time zone/State: MST/NM

PRESERVATION: HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☐ MTBE ☐ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ | CHLORIDES ☐ ANIONS ☐ ALKALINITY ☐

| Field Sample I D | Lab # | Date | Time | Matrix | # of Containers | HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | BTEX | MTBE | TRPH 418.1 | GASOLINE MOD 8015 | DIESEL - MOD 8015 | OIL - MOD 8015 | VOC 8260 | SVOC 8270 | PAH 8270 | 8081 PESTICIDES | 8082 PCBS | TCLP - METALS (RCRA) | TCLP - PEST | TOTAL METALS (RCRA) | LEAD - TOTAL | RCI | TDS | pH | EXPLOSIVES | CHLORIDES | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-2, 1 | | 3/8/22 | 1230 | S | 1 | | | | X | | X | | X | X | X | | | | | | | | | | | | | | X | | |
| S-2, 3 | | | 1231 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-2, 5 | | | 1232 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-2, 10 | | | 1233 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ~~S-2, 15~~ | | | ~~1234~~ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-3, 1 | | | 1105 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-3, 3 | | | 1106 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-3, 5 | | | 1107 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-3, 10 | | | 1108 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-3, 14 | | | 1109 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-5, 1 | | | 1300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-5, 3 | | | 1301 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-5, 5 | | | 1302 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-5, 10 | | | 1303 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-8, 1 | | | 1345 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

880-12315 Chain of Custody

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

LABORATORY Xenco

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

**LABORATORY USE ONLY:**
RECEIVING TEMP 2.1 THERM# IR9
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL #
☑ HAND DELIVERED

3/25/2022
Page 49 of 51
Received by OCD: 8/23/2023 10:40:52 AM
Released to Imaging: 12/5/2023 1:12:27 PM

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No. 2460

12315 CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N Marienfeld, Ste 202
Midland, TX 79701
432-687-0901

Data Reported to

DATE 3/10/2022 PAGE 2 OF 2

PO#: LAB WORK ORDER#

PROJECT LOCATION OR NAME SD 19 CTB Manifold

LAI PROJECT # 22-0105-04 COLLECTOR: TP & JR

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE
Time zone/State: MST/NM

| Field Sample I D | Lab # | Date | Time | Matrix | # of Containers | PRESERVATION: HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | ANALYSES: BTEX 4 ☐ MTBE ☐ | TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 4 | DIESEL - MOD 8015 4 | OIL - MOD 8015 4 | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ | CHLORIDES 4 ☐ ANIONS ☐ ALKALINITY ☐ | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-8, 3 | | 3/8/22 | 1346 | S | 1 | | | | X | | X | | X | X | X | | | | | | | | | | | | X | | |
| S-8, 5 | | | 1347 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-8, 10 | | | 1348 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-9, 0.5 | | | 1015 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-9, 1 | | | 1016 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-10, 0.5 | | | 1040 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S-10, 1 | | | 1041 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

RELINQUISHED BY (Signature) DATE/TIME 3/8/2022 1505 RECEIVED BY (Signature)

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

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

LABORATORY Xenco

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

LABORATORY USE ONLY:
RECEIVING TEMP 2.1 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☑ INTACT ☐ NOT USED
☐ CARRIER BILL #
☑ HAND DELIVERED

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Received by OCD: 8/23/2023 10:40:52 AM

Released to Imaging: 12/5/2023 1:12:27 PM

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-12315-1
SDG Number: 22-0105-04

**Login Number: 12315**
**List Number: 1**
**Creator: Teel, Brianna**

**List Source: Eurofins Midland**

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

eurofins | Environment Testing America

# ANALYTICAL REPORT

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

Laboratory Job ID: 880-14735-1
Laboratory Sample Delivery Group: 22-0105-04
Client Project/Site: SD 19 CTB Manifold

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

Attn: Mr. Mark J Larson

Holly Taylor

*Authorized for release by:*
*5/20/2022 4:57:58 PM*

Holly Taylor, Project Manager
(806)794-1296
Holly.Taylor@et.eurofinsus.com

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

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

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

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Laboratory Job ID: 880-14735-1
SDG: 22-0105-04

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# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-14735-1
Project/Site: SD 19 CTB Manifold SDG: 22-0105-04

## Qualifiers

### GC VOA

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

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| *1 | LCS/LCSD RPD exceeds control limits. |
| F1 | MS and/or MSD recovery exceeds control limits. |
| U | Indicates the analyte was analyzed for but not detected. |

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

## Job ID: 880-14735-1

**Laboratory: Eurofins Midland**

**Narrative**

**Job Narrative**
**880-14735-1**

**Receipt**
The samples were received on 5/12/2022 8:46 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 0.1°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**
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-25531 and analytical batch 880-25492 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-25452 and analytical batch 880-25494 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

**HPLC/IC**
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: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

## Client Sample ID: S-3 15'

**Lab Sample ID: 880-14735-1**
**Matrix: Solid**
**Date Collected: 05/10/22 14:56**
**Date Received: 05/12/22 08:46**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:37 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:37 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:37 | 1 |
| m,p-Xylenes | <0.00396 | U | 0.00396 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:37 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:37 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:37 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* | *05/16/22 13:30* | *05/17/22 19:37* | *1* |
| *1,4-Difluorobenzene (Surr)* | *104* | | *70 - 130* | *05/16/22 13:30* | *05/17/22 19:37* | *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 | | | 05/18/22 09:03 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.8 | U | 49.8 | | mg/Kg | | | 05/16/22 12:00 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | | mg/Kg | | 05/12/22 15:30 | 05/13/22 20:29 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 05/12/22 15:30 | 05/13/22 20:29 | 1 |
| OII Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 05/12/22 15:30 | 05/13/22 20:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *90* | | *70 - 130* | *05/12/22 15:30* | *05/13/22 20:29* | *1* |
| *o-Terphenyl (Surr)* | *91* | | *70 - 130* | *05/12/22 15:30* | *05/13/22 20:29* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **233** | | 5.01 | | mg/Kg | | | 05/16/22 18:25 | 1 |

## Client Sample ID: S-3 20'

**Lab Sample ID: 880-14735-2**
**Matrix: Solid**
**Date Collected: 05/10/22 15:00**
**Date Received: 05/12/22 08:46**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:58 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:58 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:58 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:58 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:58 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 19:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | *05/16/22 13:30* | *05/17/22 19:58* | *1* |
| *1,4-Difluorobenzene (Surr)* | *103* | | *70 - 130* | *05/16/22 13:30* | *05/17/22 19:58* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

## Client Sample ID: S-3 20'

**Date Collected: 05/10/22 15:00**
**Date Received: 05/12/22 08:46**

**Lab Sample ID: 880-14735-2**
**Matrix: Solid**

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | | mg/Kg | | | 05/18/22 09:03 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/16/22 12:00 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/12/22 15:30 | 05/13/22 20:51 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/12/22 15:30 | 05/13/22 20:51 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/12/22 15:30 | 05/13/22 20:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *84* | | *70 - 130* | *05/12/22 15:30* | *05/13/22 20:51* | *1* |
| *o-Terphenyl (Surr)* | *83* | | *70 - 130* | *05/12/22 15:30* | *05/13/22 20:51* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **72.0** | | 4.95 | | mg/Kg | | | 05/16/22 18:32 | 1 |

## Client Sample ID: S-3 25'

**Date Collected: 05/10/22 15:05**
**Date Received: 05/12/22 08:46**

**Lab Sample ID: 880-14735-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 20:19 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 20:19 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 20:19 | 1 |
| m,p-Xylenes | <0.00403 | U | 0.00403 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 20:19 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 20:19 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 20:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | *05/16/22 13:30* | *05/17/22 20:19* | *1* |
| *1,4-Difluorobenzene (Surr)* | *103* | | *70 - 130* | *05/16/22 13:30* | *05/17/22 20:19* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 05/18/22 09:03 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/16/22 12:00 | 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 | | 05/13/22 11:17 | 05/13/22 22:39 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/13/22 11:17 | 05/13/22 22:39 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

**Client Sample ID: S-3 25'**
**Date Collected: 05/10/22 15:05**
**Date Received: 05/12/22 08:46**

**Lab Sample ID: 880-14735-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/13/22 11:17 | 05/13/22 22:39 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *102* | | *70 - 130* | *05/13/22 11:17* | *05/13/22 22:39* | *1* |
| *o-Terphenyl (Surr)* | *107* | | *70 - 130* | *05/13/22 11:17* | *05/13/22 22:39* | *1* |

## Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **78.0** | | 4.99 | | mg/Kg | | | 05/16/22 18:38 | 1 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | BFB1 | DFBZ1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-14735-1 | S-3 15' | 107 | 104 |
| 880-14735-2 | S-3 20' | 104 | 103 |
| 880-14735-3 | S-3 25' | 102 | 103 |
| 890-2301-A-1-D MS | Matrix Spike | 104 | 104 |
| 890-2301-A-1-E MSD | Matrix Spike Duplicate | 103 | 102 |
| LCS 880-25636/1-A | Lab Control Sample | 98 | 96 |
| LCSD 880-25636/2-A | Lab Control Sample Dup | 102 | 102 |
| MB 880-25636/5-A | Method Blank | 97 | 98 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | 1CO1 | OTPH1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-14735-1 | S-3 15' | 90 | 91 |
| 880-14735-2 | S-3 20' | 84 | 83 |
| 880-14735-3 | S-3 25' | 102 | 107 |
| 880-14735-3 MS | S-3 25' | 86 | 83 |
| 880-14735-3 MSD | S-3 25' | 83 | 80 |
| 880-14745-A-22-B MS | Matrix Spike | 95 | 82 |
| 880-14745-A-22-C MSD | Matrix Spike Duplicate | 84 | 72 |
| LCS 880-25452/2-A | Lab Control Sample | 114 | 109 |
| LCS 880-25531/2-A | Lab Control Sample | 108 | 108 |
| LCSD 880-25452/3-A | Lab Control Sample Dup | 106 | 101 |
| LCSD 880-25531/3-A | Lab Control Sample Dup | 105 | 108 |
| MB 880-25452/1-A | Method Blank | 99 | 106 |
| MB 880-25531/1-A | Method Blank | 102 | 108 |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

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

**Lab Sample ID: MB 880-25636/5-A**
**Matrix: Solid**
**Analysis Batch: 25672**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 25636**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 11:48 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 11:48 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 11:48 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 11:48 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 11:48 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 05/16/22 13:30 | 05/17/22 11:48 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | *05/16/22 13:30* | *05/17/22 11:48* | *1* |
| *1,4-Difluorobenzene (Surr)* | *98* | | *70 - 130* | *05/16/22 13:30* | *05/17/22 11:48* | *1* |

**Lab Sample ID: LCS 880-25636/1-A**
**Matrix: Solid**
**Analysis Batch: 25672**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 25636**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09524 | | mg/Kg | | 95 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.09684 | | mg/Kg | | 97 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1120 | | mg/Kg | | 112 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.2019 | | mg/Kg | | 101 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.09544 | | mg/Kg | | 95 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *96* | | *70 - 130* |

**Lab Sample ID: LCSD 880-25636/2-A**
**Matrix: Solid**
**Analysis Batch: 25672**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 25636**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1015 | | mg/Kg | | 101 | 70 - 130 | 6 | 35 |
| Toluene | | | 0.100 | 0.09620 | | mg/Kg | | 96 | 70 - 130 | 1 | 35 |
| Ethylbenzene | | | 0.100 | 0.1102 | | mg/Kg | | 110 | 70 - 130 | 2 | 35 |
| m,p-Xylenes | | | 0.200 | 0.1975 | | mg/Kg | | 99 | 70 - 130 | 2 | 35 |
| o-Xylene | | | 0.100 | 0.09391 | | mg/Kg | | 94 | 70 - 130 | 2 | 35 |

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

**Lab Sample ID: 890-2301-A-1-D MS**
**Matrix: Solid**
**Analysis Batch: 25672**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 25636**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.0996 | 0.09146 | | mg/Kg | | 92 | 70 - 130 | | |
| Toluene | <0.00199 | U | 0.0996 | 0.08637 | | mg/Kg | | 86 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

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

**Lab Sample ID: 890-2301-A-1-D MS**
**Matrix: Solid**
**Analysis Batch: 25672**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 25636**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | <0.00199 | U | 0.0996 | 0.09756 | | mg/Kg | | 98 | 70 - 130 |
| m,p-Xylenes | <0.00398 | U | 0.199 | 0.1748 | | mg/Kg | | 88 | 70 - 130 |
| o-Xylene | <0.00199 | U | 0.0996 | 0.08344 | | mg/Kg | | 83 | 70 - 130 |

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

**Lab Sample ID: 890-2301-A-1-E MSD**
**Matrix: Solid**
**Analysis Batch: 25672**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 25636**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.0998 | 0.08543 | | mg/Kg | | 86 | 70 - 130 | 7 | 35 |
| Toluene | <0.00199 | U | 0.0998 | 0.08179 | | mg/Kg | | 81 | 70 - 130 | 5 | 35 |
| Ethylbenzene | <0.00199 | U | 0.0998 | 0.09262 | | mg/Kg | | 93 | 70 - 130 | 5 | 35 |
| m,p-Xylenes | <0.00398 | U | 0.200 | 0.1656 | | mg/Kg | | 83 | 70 - 130 | 5 | 35 |
| o-Xylene | <0.00199 | U | 0.0998 | 0.07884 | | mg/Kg | | 79 | 70 - 130 | 6 | 35 |

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

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

**Lab Sample ID: MB 880-25452/1-A**
**Matrix: Solid**
**Analysis Batch: 25494**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 25452**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/12/22 15:30 | 05/13/22 10:39 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/12/22 15:30 | 05/13/22 10:39 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/12/22 15:30 | 05/13/22 10:39 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *99* | | *70 - 130* | *05/12/22 15:30* | *05/13/22 10:39* | *1* |
| *o-Terphenyl (Surr)* | *106* | | *70 - 130* | *05/12/22 15:30* | *05/13/22 10:39* | *1* |

**Lab Sample ID: LCS 880-25452/2-A**
**Matrix: Solid**
**Analysis Batch: 25494**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 25452**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1110 | | mg/Kg | | 111 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1100 | | mg/Kg | | 110 | 70 - 130 |

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# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

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

**Lab Sample ID: LCS 880-25452/2-A**
**Matrix: Solid**
**Analysis Batch: 25494**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 25452**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 114 | | 70 - 130 |
| o-Terphenyl (Surr) | 109 | | 70 - 130 |

**Lab Sample ID: LCSD 880-25452/3-A**
**Matrix: Solid**
**Analysis Batch: 25494**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 25452**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1129 | | mg/Kg | | 113 | 70 - 130 | 2 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1011 | | mg/Kg | | 101 | 70 - 130 | 8 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 106 | | 70 - 130 |
| o-Terphenyl (Surr) | 101 | | 70 - 130 |

**Lab Sample ID: 880-14745-A-22-B MS**
**Matrix: Solid**
**Analysis Batch: 25494**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 25452**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 1000 | 904.0 | | mg/Kg | | 88 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | 200 | F1 | 1000 | 977.4 | | mg/Kg | | 78 | 70 - 130 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 95 | | 70 - 130 |
| o-Terphenyl (Surr) | 82 | | 70 - 130 |

**Lab Sample ID: 880-14745-A-22-C MSD**
**Matrix: Solid**
**Analysis Batch: 25494**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 25452**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 998 | 806.2 | | mg/Kg | | 78 | 70 - 130 | 11 | 20 |
| Diesel Range Organics (Over C10-C28) | 200 | F1 | 998 | 863.2 | F1 | mg/Kg | | 66 | 70 - 130 | 12 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 84 | | 70 - 130 |
| o-Terphenyl (Surr) | 72 | | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

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

**Lab Sample ID: MB 880-25531/1-A**
**Matrix: Solid**
**Analysis Batch: 25492**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 25531**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/13/22 11:17 | 05/13/22 21:34 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/13/22 11:17 | 05/13/22 21:34 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/13/22 11:17 | 05/13/22 21:34 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *102* | | *70 - 130* | *05/13/22 11:17* | *05/13/22 21:34* | *1* |
| *o-Terphenyl (Surr)* | *108* | | *70 - 130* | *05/13/22 11:17* | *05/13/22 21:34* | *1* |

**Lab Sample ID: LCS 880-25531/2-A**
**Matrix: Solid**
**Analysis Batch: 25492**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 25531**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 883.9 | | mg/Kg | | 88 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1071 | | mg/Kg | | 107 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *108* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *108* | | *70 - 130* |

**Lab Sample ID: LCSD 880-25531/3-A**
**Matrix: Solid**
**Analysis Batch: 25492**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 25531**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1141 | *1 | mg/Kg | | 114 | 70 - 130 | 25 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1077 | | mg/Kg | | 108 | 70 - 130 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *105* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *108* | | *70 - 130* |

**Lab Sample ID: 880-14735-3 MS**
**Matrix: Solid**
**Analysis Batch: 25492**

**Client Sample ID: S-3 25'**
**Prep Type: Total/NA**
**Prep Batch: 25531**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U *1 | 1000 | 817.2 | | mg/Kg | | 80 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 1000 | 945.2 | | mg/Kg | | 95 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

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

**Lab Sample ID: 880-14735-3 MS**
**Matrix: Solid**
**Analysis Batch: 25492**

**Client Sample ID: S-3 25'**
**Prep Type: Total/NA**
**Prep Batch: 25531**

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 86 | | 70 - 130 |
| o-Terphenyl (Surr) | 83 | | 70 - 130 |

**Lab Sample ID: 880-14735-3 MSD**
**Matrix: Solid**
**Analysis Batch: 25492**

**Client Sample ID: S-3 25'**
**Prep Type: Total/NA**
**Prep Batch: 25531**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U *1 | 998 | 812.7 | | mg/Kg | | 80 | 70 - 130 | 1 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 998 | 917.5 | | mg/Kg | | 92 | 70 - 130 | 3 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 83 | | 70 - 130 |
| o-Terphenyl (Surr) | 80 | | 70 - 130 |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-25455/1-A**
**Matrix: Solid**
**Analysis Batch: 25619**

**Client Sample ID: Method Blank**
**Prep Type: Soluble**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 05/16/22 16:50 | 1 |

**Lab Sample ID: LCS 880-25455/2-A**
**Matrix: Solid**
**Analysis Batch: 25619**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 255.9 | | mg/Kg | | 102 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-25455/3-A**
**Matrix: Solid**
**Analysis Batch: 25619**

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

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 271.5 | | mg/Kg | | 109 | 90 - 110 | 6 | 20 |

**Lab Sample ID: 880-14735-3 MS**
**Matrix: Solid**
**Analysis Batch: 25619**

**Client Sample ID: S-3 25'**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 78.0 | | 250 | 347.8 | | mg/Kg | | 108 | 90 - 110 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 880-14735-3 MSD**
**Matrix: Solid**
**Analysis Batch: 25619**

**Client Sample ID: S-3 25'**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 78.0 | | 250 | 340.6 | | mg/Kg | | 105 | 90 - 110 | 2 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-14735-1
Project/Site: SD 19 CTB Manifold SDG: 22-0105-04

## GC VOA

### Prep Batch: 25636

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-14735-1 | S-3 15' | Total/NA | Solid | 5035 | |
| 880-14735-2 | S-3 20' | Total/NA | Solid | 5035 | |
| 880-14735-3 | S-3 25' | Total/NA | Solid | 5035 | |
| MB 880-25636/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-25636/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-25636/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 890-2301-A-1-D MS | Matrix Spike | Total/NA | Solid | 5035 | |
| 890-2301-A-1-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 5035 | |

### Analysis Batch: 25672

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-14735-1 | S-3 15' | Total/NA | Solid | 8021B | 25636 |
| 880-14735-2 | S-3 20' | Total/NA | Solid | 8021B | 25636 |
| 880-14735-3 | S-3 25' | Total/NA | Solid | 8021B | 25636 |
| MB 880-25636/5-A | Method Blank | Total/NA | Solid | 8021B | 25636 |
| LCS 880-25636/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 25636 |
| LCSD 880-25636/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 25636 |
| 890-2301-A-1-D MS | Matrix Spike | Total/NA | Solid | 8021B | 25636 |
| 890-2301-A-1-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 8021B | 25636 |

### Analysis Batch: 25795

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-14735-1 | S-3 15' | Total/NA | Solid | Total BTEX | |
| 880-14735-2 | S-3 20' | Total/NA | Solid | Total BTEX | |
| 880-14735-3 | S-3 25' | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Prep Batch: 25452

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-14735-1 | S-3 15' | Total/NA | Solid | 8015NM Prep | |
| 880-14735-2 | S-3 20' | Total/NA | Solid | 8015NM Prep | |
| MB 880-25452/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-25452/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-25452/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-14745-A-22-B MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-14745-A-22-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 25492

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-14735-3 | S-3 25' | Total/NA | Solid | 8015B NM | 25531 |
| MB 880-25531/1-A | Method Blank | Total/NA | Solid | 8015B NM | 25531 |
| LCS 880-25531/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 25531 |
| LCSD 880-25531/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 25531 |
| 880-14735-3 MS | S-3 25' | Total/NA | Solid | 8015B NM | 25531 |
| 880-14735-3 MSD | S-3 25' | Total/NA | Solid | 8015B NM | 25531 |

### Analysis Batch: 25494

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-14735-1 | S-3 15' | Total/NA | Solid | 8015B NM | 25452 |
| 880-14735-2 | S-3 20' | Total/NA | Solid | 8015B NM | 25452 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

## GC Semi VOA (Continued)

### Analysis Batch: 25494 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-25452/1-A | Method Blank | Total/NA | Solid | 8015B NM | 25452 |
| LCS 880-25452/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 25452 |
| LCSD 880-25452/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 25452 |
| 880-14745-A-22-B MS | Matrix Spike | Total/NA | Solid | 8015B NM | 25452 |
| 880-14745-A-22-C MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 25452 |

### Prep Batch: 25531

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-14735-3 | S-3 25' | Total/NA | Solid | 8015NM Prep | |
| MB 880-25531/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-25531/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-25531/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-14735-3 MS | S-3 25' | Total/NA | Solid | 8015NM Prep | |
| 880-14735-3 MSD | S-3 25' | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 25627

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-14735-1 | S-3 15' | Total/NA | Solid | 8015 NM | |
| 880-14735-2 | S-3 20' | Total/NA | Solid | 8015 NM | |
| 880-14735-3 | S-3 25' | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 25455

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-14735-1 | S-3 15' | Soluble | Solid | DI Leach | |
| 880-14735-2 | S-3 20' | Soluble | Solid | DI Leach | |
| 880-14735-3 | S-3 25' | Soluble | Solid | DI Leach | |
| MB 880-25455/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-25455/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-25455/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-14735-3 MS | S-3 25' | Soluble | Solid | DI Leach | |
| 880-14735-3 MSD | S-3 25' | Soluble | Solid | DI Leach | |

### Analysis Batch: 25619

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-14735-1 | S-3 15' | Soluble | Solid | 300.0 | 25455 |
| 880-14735-2 | S-3 20' | Soluble | Solid | 300.0 | 25455 |
| 880-14735-3 | S-3 25' | Soluble | Solid | 300.0 | 25455 |
| MB 880-25455/1-A | Method Blank | Soluble | Solid | 300.0 | 25455 |
| LCS 880-25455/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 25455 |
| LCSD 880-25455/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 25455 |
| 880-14735-3 MS | S-3 25' | Soluble | Solid | 300.0 | 25455 |
| 880-14735-3 MSD | S-3 25' | Soluble | Solid | 300.0 | 25455 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

## Client Sample ID: S-3 15'

**Date Collected: 05/10/22 14:56**
**Date Received: 05/12/22 08:46**

## Lab Sample ID: 880-14735-1

**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 | | | 5.05 g | 5 mL | 25636 | 05/16/22 13:30 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 25672 | 05/17/22 19:37 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 25795 | 05/18/22 09:03 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 25627 | 05/16/22 12:00 | SM | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 25452 | 05/12/22 15:30 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 25494 | 05/13/22 20:29 | SM | XEN MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 25455 | 05/12/22 15:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 25619 | 05/16/22 18:25 | CH | XEN MID |

## Client Sample ID: S-3 20'

**Date Collected: 05/10/22 15:00**
**Date Received: 05/12/22 08:46**

## Lab Sample ID: 880-14735-2

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.97 g | 5 mL | 25636 | 05/16/22 13:30 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 25672 | 05/17/22 19:58 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 25795 | 05/18/22 09:03 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 25627 | 05/16/22 12:00 | SM | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 25452 | 05/12/22 15:30 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 25494 | 05/13/22 20:51 | SM | XEN MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 25455 | 05/12/22 15:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 25619 | 05/16/22 18:32 | CH | XEN MID |

## Client Sample ID: S-3 25'

**Date Collected: 05/10/22 15:05**
**Date Received: 05/12/22 08:46**

## Lab Sample ID: 880-14735-3

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 25636 | 05/16/22 13:30 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 25672 | 05/17/22 20:19 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 25795 | 05/18/22 09:03 | AJ | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 25627 | 05/16/22 12:00 | SM | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 25531 | 05/13/22 11:17 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 25492 | 05/13/22 22:39 | SM | XEN MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 25455 | 05/12/22 15:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 25619 | 05/16/22 18:38 | 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. Job ID: 880-14735-1
Project/Site: SD 19 CTB Manifold SDG: 22-0105-04

## 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: 880-14735-1
Project/Site: SD 19 CTB Manifold SDG: 22-0105-04

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

**Protocol References:**

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-14735-1
SDG: 22-0105-04

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-14735-1 | S-3 15' | Solid | 05/10/22 14:56 | 05/12/22 08:46 |
| 880-14735-2 | S-3 20' | Solid | 05/10/22 15:00 | 05/12/22 08:46 |
| 880-14735-3 | S-3 25' | Solid | 05/10/22 15:05 | 05/12/22 08:46 |

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No. 2237

14735 CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N Marienfeld Ste 202
Midland TX 79701
432 687 0901

Data Reported to

DATE 5-12-22 PAGE 1 OF 1

PO# LAB WORK ORDER#

PROJECT LOCATION OR NAME SD 19 CTB Manifold

LAI PROJECT # 22-0105-04 COLLECTOR JR

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE
Time zone/State MST/NM

| Field Sample I D | Lab # | Date | Time | Matrix | # of Containers | PRESERVATION: HCl | $HNO_3$ | $H_2SO_4$ | NaOH | ICE | UNPRESSERVED | ANALYSES: BTEX + MTBE | TRPH 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 | 8082 PCBS | TCLP - METALS (RCRA) | TCLP PEST | TCLP HERB | TCLP VOC | TOTAL METALS (RCRA) | Semi-VOC | LEAD - TOTAL | OTHER LIST | DW 200.8 | TCLP | TOX | FLASHPOINT | TDS | TSS | % MOISTURE | pH | HEXAVALENT CHROMIUM | CYANIDE | EXPLOSIVES | PECHLORATE | CHLORIDE + ANIONS | ALKALINITY | Hold | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-3 15' | | 5-10-22 | 1456 | S | 1 | | | | | X | | X | | X | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | Hold Samples |
| S-3 20' | | " | 1500 | " | " | | | | | " | | " | | " | " | " | | | | | | | | | | | | | | | | | | | | | | | | | | " | | | | | S-3 30', 35', and 40' |
| S-3 25' | | " | 1505 | " | " | | | | | " | | " | | " | " | " | | | | | | | | | | | | | | | | | | | | | | | | | | " | | | | | |
| S-3 30' | | " | 1510 | " | " | | | | | " | | " | | " | " | " | | | | | | | | | | | | | | | | | | | | | | | | | | " | | | | X | |
| S-3 35' | | " | 1515 | " | " | | | | | " | | " | | " | " | " | | | | | | | | | | | | | | | | | | | | | | | | | | " | | | | X | |
| S-3 40' | | " | 1520 | " | " | | | | | " | | " | | " | " | " | | | | | | | | | | | | | | | | | | | | | | | | | | " | | | | X | |

TOTAL 6

RELINQUISHED BY (Signature) Jake Peters DATE/TIME 5/12/22 8:46 RECEIVED BY (Signature)

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

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

LABORATORY Xenco

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

LABORATORY USE ONLY
RECEIVING TEMP 3.1 THERM# IR2
CUSTODY SEALS - ☐ BROKEN ☑ INTACT ☐ NOT USED
☐ CARRIER BILL #
☑ HAND DELIVERED

880-14735 Chain of Custody

Received by OCD: 8/23/2023 10:40:52 AM

Released to Imaging: 12/5/2023 1:12:27 PM



5/20/2022

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-14735-1
SDG Number: 22-0105-04

**Login Number: 14735**
**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 | |

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 5/11/2023 1:08:59 PM

## JOB DESCRIPTION

SD 19 CTB Manifold
SDG NUMBER 2995

## JOB NUMBER

880-28227-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.



Released to Imaging: 12/5/2023 1:12:27 PM

my EOL

# Eurofins Midland

## Job Notes

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

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

## Authorization

Holly Taylor

Generated
5/11/2023 1:08:59 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Laboratory Job ID: 880-28227-1
SDG: 2995

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# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-28227-1
Project/Site: SD 19 CTB Manifold SDG: 2995

## Qualifiers

### GC VOA

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

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| *- | LCS and/or LCSD is outside acceptance limits, low biased. |
| *1 | LCS/LCSD RPD exceeds control limits. |
| 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. |

### HPLC/IC

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

## Glossary

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

# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-28227-1
Project/Site: SD 19 CTB Manifold SDG: 2995

## Glossary (Continued)

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# Case Narrative

Client: Larson & Associates, Inc. Job ID: 880-28227-1
Project/Site: SD 19 CTB Manifold SDG: 2995

## Job ID: 880-28227-1

**Laboratory: Eurofins Midland**

**Narrative**

**Job Narrative**
**880-28227-1**

**Receipt**
The samples were received on 5/10/2023 8:23 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 -8.9°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: C-1, 1' (880-28227-1), C-2, 0-4.1' (880-28227-2), C-3, 1' (880-28227-3), C-4, 1' (880-28227-4), C-5, 4' (880-28227-5), C-6, 4' (880-28227-6), C-7, 1.5' (880-28227-7), C-8, 1.5' (880-28227-8), C-9, 4' (880-28227-9), C-10, 0-4.1' (880-28227-10), C-11, 0-4.1' (880-28227-11) and C-12, 0-1' (880-28227-12).

**GC VOA**
Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-53009 and analytical batch 880-53007 recovered outside control limits for the following analytes: Benzene. The LCS shows recovery for the batch.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-53009 and analytical batch 880-53007 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-53006 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-53010/5-A). 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 880-53010 and analytical batch 880-53006 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

**GC Semi VOA**
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53014 and analytical batch 880-52999 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-53014/2-A) and (LCSD 880-53014/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate compounds were inadvertently omitted during the extraction process for the following samples: C-1, 1' (880-28227-1) and (880-28227-A-1-E MS).

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: C-2, 0-4.1' (880-28227-2), C-3, 1' (880-28227-3), C-4, 1' (880-28227-4), C-5, 4' (880-28227-5), C-6, 4' (880-28227-6), C-7, 1.5' (880-28227-7), C-8, 1.5' (880-28227-8), C-9, 4' (880-28227-9), C-10, 0-4.1' (880-28227-10) and (880-28227-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: C-11, 0-4.1' (880-28227-11) and C-12, 0-1' (880-28227-12). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: An incorrect volume of spiking solution was inadvertently added to the laboratory control sample (LCS), laboratory control sample (LCSD) associated with preparation batch 880-53014 and analytical batch 880-52999. Percent recoveries are based on

# Case Narrative

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Job ID: 880-28227-1 (Continued)

### Laboratory: Eurofins Midland (Continued)

the amount spiked.

Method 8015MOD_NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike (MS); therefore, matrix spike recoveries are unavailable for preparation batch 880-53014 and analytical batch 880-52999. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-53014 and analytical batch 880-52999 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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

**HPLC/IC**

Method 300_ORGFM_28D: The matrix spike (MS) recoveries for preparation batch 880-53024 and 880-53024 and analytical batch 880-53052 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.The associated samples are: C-1, 1' (880-28227-1), C-2, 0-4.1' (880-28227-2), C-3, 1' (880-28227-3), C-4, 1' (880-28227-4), C-5, 4' (880-28227-5), C-6, 4' (880-28227-6), C-7, 1.5' (880-28227-7), C-8, 1.5' (880-28227-8), C-9, 4' (880-28227-9), C-10, 0-4.1' (880-28227-10) and (880-28227-A-1-H MS).

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. Job ID: 880-28227-1
Project/Site: SD 19 CTB Manifold SDG: 2995

## Client Sample ID: C-1, 1'
**Lab Sample ID: 880-28227-1**
**Date Collected: 05/09/23 08:00** **Matrix: Solid**
**Date Received: 05/10/23 08:23**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U *+ F1 | 0.00199 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:31 | 1 |
| **Toluene** | **0.00211** | | 0.00199 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:31 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:31 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:31 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:31 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | *05/10/23 08:56* | *05/10/23 12:31* | *1* |
| *1,4-Difluorobenzene (Surr)* | *116* | | *70 - 130* | *05/10/23 08:56* | *05/10/23 12:31* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 05/10/23 16:42 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U F1 F2 *- | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 11:35 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U F1 F2 *-*1 | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 11:35 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 11:35 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *2* | *S1-* | *70 - 130* | *05/10/23 10:07* | *05/10/23 11:35* | *1* |
| *o-Terphenyl (Surr)* | *0.5* | *S1-* | *70 - 130* | *05/10/23 10:07* | *05/10/23 11:35* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **2850** | **F1** | 25.2 | | mg/Kg | | | 05/10/23 18:47 | 5 |

## Client Sample ID: C-2, 0-4.1'
**Lab Sample ID: 880-28227-2**
**Date Collected: 05/09/23 08:05** **Matrix: Solid**
**Date Received: 05/10/23 08:23**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U *+ | 0.00200 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:24 | 1 |
| **Toluene** | **0.0104** | | 0.00200 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:24 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:24 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:24 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:24 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *70 - 130* | *05/10/23 08:56* | *05/10/23 17:24* | *1* |
| *1,4-Difluorobenzene (Surr)* | *114* | | *70 - 130* | *05/10/23 08:56* | *05/10/23 17:24* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Client Sample ID: C-2, 0-4.1'

**Lab Sample ID: 880-28227-2**
**Matrix: Solid**
**Date Collected: 05/09/23 08:05**
**Date Received: 05/10/23 08:23**

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total BTEX** | **0.0104** | | 0.00399 | | mg/Kg | | | 05/11/23 12:57 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U *- | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 12:40 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U *- *1 | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 12:40 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 12:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *259* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 12:40* | *1* |
| *o-Terphenyl (Surr)* | *303* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 12:40* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **10000** | | 99.2 | | mg/Kg | | | 05/10/23 19:02 | 20 |

## Client Sample ID: C-3, 1'

**Lab Sample ID: 880-28227-3**
**Matrix: Solid**
**Date Collected: 05/09/23 08:10**
**Date Received: 05/10/23 08:23**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U *+ | 0.00199 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:44 | 1 |
| **Toluene** | **0.0149** | | 0.00199 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:44 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:44 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:44 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:44 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 17:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | *05/10/23 08:56* | *05/10/23 17:44* | *1* |
| *1,4-Difluorobenzene (Surr)* | *109* | | *70 - 130* | *05/10/23 08:56* | *05/10/23 17:44* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total BTEX** | **0.0149** | | 0.00398 | | mg/Kg | | | 05/11/23 12:57 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U *- | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 13:02 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U *- *1 | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 13:02 | 1 |

Eurofins Midland

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Client Sample ID: C-3, 1'

**Date Collected: 05/09/23 08:10**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 13:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *243* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 13:02* | *1* |
| *o-Terphenyl (Surr)* | *273* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 13:02* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **4250** | | 49.9 | | mg/Kg | | | 05/10/23 19:08 | 10 |

## Client Sample ID: C-4, 1'

**Date Collected: 05/09/23 08:15**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-4**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U F1 | 0.00201 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:50 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:50 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:50 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:50 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:50 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *85* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 12:50* | *1* |
| *1,4-Difluorobenzene (Surr)* | *101* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 12:50* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | | mg/Kg | | | 05/10/23 16:44 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U *- | 50.0 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 13:24 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U *- *1 | 50.0 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 13:24 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 13:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *267* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 13:24* | *1* |
| *o-Terphenyl (Surr)* | *299* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 13:24* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **6480** | | 99.4 | | mg/Kg | | | 05/10/23 19:13 | 20 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Client Sample ID: C-5, 4'

**Date Collected: 05/09/23 08:20**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-5**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:17 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:17 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:17 | 1 |
| m,p-Xylenes | <0.00404 | U | 0.00404 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:17 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:17 | 1 |
| Xylenes, Total | <0.00404 | U | 0.00404 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:17 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *81* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 17:17* | *1* |
| *1,4-Difluorobenzene (Surr)* | *78* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 17:17* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | | mg/Kg | | | 05/11/23 13:01 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.8 | U | 49.8 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U *- | 49.8 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 13:46 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U *- *1 | 49.8 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 13:46 | 1 |
| OII Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 13:46 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *225* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 13:46* | *1* |
| *o-Terphenyl (Surr)* | *266* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 13:46* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **484** | | 5.01 | | mg/Kg | | | 05/10/23 19:18 | 1 |

## Client Sample ID: C-6, 4'

**Date Collected: 05/09/23 08:25**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-6**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:38 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:38 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:38 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:38 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:38 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 17:38* | *1* |
| *1,4-Difluorobenzene (Surr)* | *75* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 17:38* | *1* |

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# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Client Sample ID: C-6, 4'

**Date Collected: 05/09/23 08:25**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-6**
**Matrix: Solid**

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 05/11/23 13:01 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U *- | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 14:08 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U *- *1 | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 14:08 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 14:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *269* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 14:08* | *1* |
| *o-Terphenyl (Surr)* | *316* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 14:08* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **801** | | 25.1 | | mg/Kg | | | 05/10/23 19:34 | 5 |

## Client Sample ID: C-7, 1.5'

**Date Collected: 05/09/23 08:30**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-7**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:58 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:58 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:58 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:58 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:58 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 17:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *90* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 17:58* | *1* |
| *1,4-Difluorobenzene (Surr)* | *93* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 17:58* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 05/11/23 13:01 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U *- | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 14:29 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U *- *1 | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 14:29 | 1 |

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# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Client Sample ID: C-7, 1.5'

**Date Collected: 05/09/23 08:30**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-7**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 14:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *219* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 14:29* | *1* |
| *o-Terphenyl (Surr)* | *252* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 14:29* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **1070** | | 25.0 | | mg/Kg | | | 05/10/23 19:39 | 5 |

## Client Sample ID: C-8, 1.5'

**Date Collected: 05/09/23 08:35**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-8**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:19 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:19 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:19 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:19 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:19 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *90* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 18:19* | *1* |
| *1,4-Difluorobenzene (Surr)* | *92* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 18:19* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 05/11/23 13:01 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U *- | 50.0 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 14:51 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U *- *1 | 50.0 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 14:51 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 14:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *233* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 14:51* | *1* |
| *o-Terphenyl (Surr)* | *263* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 14:51* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **1410** | | 25.1 | | mg/Kg | | | 05/10/23 19:44 | 5 |

# Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-28227-1
Project/Site: SD 19 CTB Manifold SDG: 2995

## Client Sample ID: C-9, 4'
**Lab Sample ID: 880-28227-9**
**Date Collected: 05/09/23 09:00** **Matrix: Solid**
**Date Received: 05/10/23 08:23**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:39 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:39 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:39 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:39 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:39 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 18:39 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 18:39* | *1* |
| *1,4-Difluorobenzene (Surr)* | *92* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 18:39* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | | mg/Kg | | | 05/11/23 13:01 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U *- | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 15:13 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U *- *1 | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 15:13 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 15:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *254* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 15:13* | *1* |
| *o-Terphenyl (Surr)* | *306* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 15:13* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **1060** | | 25.1 | | mg/Kg | | | 05/10/23 19:50 | 5 |

## Client Sample ID: C-10, 0-4.1'
**Lab Sample ID: 880-28227-10**
**Date Collected: 05/09/23 09:10** **Matrix: Solid**
**Date Received: 05/10/23 08:23**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:00 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:00 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:00 | 1 |
| m,p-Xylenes | <0.00401 | U | 0.00401 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:00 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:00 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *89* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 19:00* | *1* |
| *1,4-Difluorobenzene (Surr)* | *87* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 19:00* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Client Sample ID: C-10, 0-4.1'

**Lab Sample ID: 880-28227-10**
**Matrix: Solid**
**Date Collected: 05/09/23 09:10**
**Date Received: 05/10/23 08:23**

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00401 | U | 0.00401 | | mg/Kg | | | 05/11/23 13:01 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.8 | U | 49.8 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U *- | 49.8 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 15:34 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U *- *1 | 49.8 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 15:34 | 1 |
| OII Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 15:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *228* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 15:34* | *1* |
| *o-Terphenyl (Surr)* | *258* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 15:34* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **1670** | | 25.0 | | mg/Kg | | | 05/10/23 19:55 | 5 |

## Client Sample ID: C-11, 0-4.1'

**Lab Sample ID: 880-28227-11**
**Matrix: Solid**
**Date Collected: 05/09/23 09:20**
**Date Received: 05/10/23 08:23**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:20 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:20 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:20 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:20 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:20 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 19:20* | *1* |
| *1,4-Difluorobenzene (Surr)* | *78* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 19:20* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 05/11/23 13:01 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.8 | U | 49.8 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U *- | 49.8 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 16:17 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U *- *1 | 49.8 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 16:17 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Client Sample ID: C-11, 0-4.1'

**Date Collected: 05/09/23 09:20**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-11**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| OII Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 16:17 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *410* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 16:17* | *1* |
| *o-Terphenyl (Surr)* | *416* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 16:17* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **748** | | 24.8 | | mg/Kg | | | 05/10/23 20:00 | 5 |

## Client Sample ID: C-12, 0-1'

**Date Collected: 05/09/23 09:30**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-12**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:40 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:40 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:40 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:40 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:40 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 05/10/23 08:58 | 05/10/23 19:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *92* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 19:40* | *1* |
| *1,4-Difluorobenzene (Surr)* | *82* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 19:40* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 05/11/23 13:01 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/10/23 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U *- | 50.0 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 16:38 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U *- *1 | 50.0 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 16:38 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/10/23 10:07 | 05/10/23 16:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *237* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 16:38* | *1* |
| *o-Terphenyl (Surr)* | *287* | *S1+* | *70 - 130* | *05/10/23 10:07* | *05/10/23 16:38* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **1440** | | 25.2 | | mg/Kg | | | 05/10/23 20:16 | 5 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## 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) | | | | | | | | | | |
| 880-28227-1 | C-1, 1' | 102 | 116 | | | | | | | | | | |
| 880-28227-1 MS | C-1, 1' | 104 | 107 | | | | | | | | | | |
| 880-28227-1 MSD | C-1, 1' | 95 | 108 | | | | | | | | | | |
| 880-28227-2 | C-2, 0-4.1' | 87 | 114 | | | | | | | | | | |
| 880-28227-3 | C-3, 1' | 99 | 109 | | | | | | | | | | |
| 880-28227-4 | C-4, 1' | 85 | 101 | | | | | | | | | | |
| 880-28227-4 MS | C-4, 1' | 99 | 115 | | | | | | | | | | |
| 880-28227-4 MSD | C-4, 1' | 102 | 105 | | | | | | | | | | |
| 880-28227-5 | C-5, 4' | 81 | 78 | | | | | | | | | | |
| 880-28227-6 | C-6, 4' | 87 | 75 | | | | | | | | | | |
| 880-28227-7 | C-7, 1.5' | 90 | 93 | | | | | | | | | | |
| 880-28227-8 | C-8, 1.5' | 90 | 92 | | | | | | | | | | |
| 880-28227-9 | C-9, 4' | 87 | 92 | | | | | | | | | | |
| 880-28227-10 | C-10, 0-4.1' | 89 | 87 | | | | | | | | | | |
| 880-28227-11 | C-11, 0-4.1' | 87 | 78 | | | | | | | | | | |
| 880-28227-12 | C-12, 0-1' | 92 | 82 | | | | | | | | | | |
| LCS 880-53009/1-A | Lab Control Sample | 99 | 106 | | | | | | | | | | |
| LCS 880-53010/1-A | Lab Control Sample | 108 | 104 | | | | | | | | | | |
| LCSD 880-53009/2-A | Lab Control Sample Dup | 102 | 102 | | | | | | | | | | |
| LCSD 880-53010/2-A | Lab Control Sample Dup | 108 | 106 | | | | | | | | | | |
| MB 880-53009/5-A | Method Blank | 97 | 108 | | | | | | | | | | |
| MB 880-53010/5-A | Method Blank | 66 S1- | 77 | | | | | | | | | | |

**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) | | | | | | | | | | |
| 880-28227-1 | C-1, 1' | 2 S1- | 0.5 S1- | | | | | | | | | | |
| 880-28227-1 MS | C-1, 1' | 2 S1- | 0.4 S1- | | | | | | | | | | |
| 880-28227-1 MSD | C-1, 1' | 170 S1+ | 176 S1+ | | | | | | | | | | |
| 880-28227-2 | C-2, 0-4.1' | 259 S1+ | 303 S1+ | | | | | | | | | | |
| 880-28227-3 | C-3, 1' | 243 S1+ | 273 S1+ | | | | | | | | | | |
| 880-28227-4 | C-4, 1' | 267 S1+ | 299 S1+ | | | | | | | | | | |
| 880-28227-5 | C-5, 4' | 225 S1+ | 266 S1+ | | | | | | | | | | |
| 880-28227-6 | C-6, 4' | 269 S1+ | 316 S1+ | | | | | | | | | | |
| 880-28227-7 | C-7, 1.5' | 219 S1+ | 252 S1+ | | | | | | | | | | |
| 880-28227-8 | C-8, 1.5' | 233 S1+ | 263 S1+ | | | | | | | | | | |
| 880-28227-9 | C-9, 4' | 254 S1+ | 306 S1+ | | | | | | | | | | |
| 880-28227-10 | C-10, 0-4.1' | 228 S1+ | 258 S1+ | | | | | | | | | | |
| 880-28227-11 | C-11, 0-4.1' | 410 S1+ | 416 S1+ | | | | | | | | | | |
| 880-28227-12 | C-12, 0-1' | 237 S1+ | 287 S1+ | | | | | | | | | | |
| LCS 880-53014/2-A | Lab Control Sample | 62 S1- | 74 | | | | | | | | | | |
| LCSD 880-53014/3-A | Lab Control Sample Dup | 50 S1- | 57 S1- | | | | | | | | | | |
| MB 880-53014/1-A | Method Blank | 117 | 150 S1+ | | | | | | | | | | |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

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

**Lab Sample ID: MB 880-53009/5-A**
**Matrix: Solid**
**Analysis Batch: 53007**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 53009**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:09 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:09 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:09 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:09 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:09 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 05/10/23 08:56 | 05/10/23 12:09 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | *05/10/23 08:56* | *05/10/23 12:09* | *1* |
| *1,4-Difluorobenzene (Surr)* | *108* | | *70 - 130* | *05/10/23 08:56* | *05/10/23 12:09* | *1* |

**Lab Sample ID: LCS 880-53009/1-A**
**Matrix: Solid**
**Analysis Batch: 53007**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 53009**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1288 | | mg/Kg | | 129 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1170 | | mg/Kg | | 117 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1109 | | mg/Kg | | 111 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.2216 | | mg/Kg | | 111 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1080 | | mg/Kg | | 108 | 70 - 130 | | |

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

**Lab Sample ID: LCSD 880-53009/2-A**
**Matrix: Solid**
**Analysis Batch: 53007**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 53009**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1413 | *+ | mg/Kg | | 141 | 70 - 130 | 9 | 35 |
| Toluene | | | 0.100 | 0.1228 | | mg/Kg | | 123 | 70 - 130 | 5 | 35 |
| Ethylbenzene | | | 0.100 | 0.1218 | | mg/Kg | | 122 | 70 - 130 | 9 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2446 | | mg/Kg | | 122 | 70 - 130 | 10 | 35 |
| o-Xylene | | | 0.100 | 0.1207 | | mg/Kg | | 121 | 70 - 130 | 11 | 35 |

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

**Lab Sample ID: 880-28227-1 MS**
**Matrix: Solid**
**Analysis Batch: 53007**

**Client Sample ID: C-1, 1'**
**Prep Type: Total/NA**
**Prep Batch: 53009**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U *+ F1 | 0.0998 | 0.1492 | F1 | mg/Kg | | 149 | 70 - 130 | | |
| Toluene | 0.00211 | | 0.0998 | 0.1223 | | mg/Kg | | 120 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-28227-1
Project/Site: SD 19 CTB Manifold SDG: 2995

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

**Lab Sample ID: 880-28227-1 MS** **Client Sample ID: C-1, 1'**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 53007** **Prep Batch: 53009**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | <0.00199 | U | 0.0998 | 0.1191 | | mg/Kg | | 119 | 70 - 130 |
| m,p-Xylenes | <0.00398 | U | 0.200 | 0.2379 | | mg/Kg | | 119 | 70 - 130 |
| o-Xylene | <0.00199 | U | 0.0998 | 0.1148 | | mg/Kg | | 115 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *107* | | *70 - 130* |

**Lab Sample ID: 880-28227-1 MSD** **Client Sample ID: C-1, 1'**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 53007** **Prep Batch: 53009**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U *+ F1 | 0.0990 | 0.1492 | F1 | mg/Kg | | 150 | 70 - 130 | 0 | 35 |
| Toluene | 0.00211 | | 0.0990 | 0.1188 | | mg/Kg | | 118 | 70 - 130 | 3 | 35 |
| Ethylbenzene | <0.00199 | U | 0.0990 | 0.1143 | | mg/Kg | | 115 | 70 - 130 | 4 | 35 |
| m,p-Xylenes | <0.00398 | U | 0.198 | 0.2238 | | mg/Kg | | 113 | 70 - 130 | 6 | 35 |
| o-Xylene | <0.00199 | U | 0.0990 | 0.1089 | | mg/Kg | | 110 | 70 - 130 | 5 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *95* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *108* | | *70 - 130* |

**Lab Sample ID: MB 880-53010/5-A** **Client Sample ID: Method Blank**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 53006** **Prep Batch: 53010**

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:28 | 1 |
| Toluene | <0.00200 | U | 0.00200 | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:28 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:28 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:28 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:28 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | mg/Kg | | 05/10/23 08:58 | 05/10/23 12:28 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *66* | *S1-* | *70 - 130* | *05/10/23 08:58* | *05/10/23 12:28* | *1* |
| *1,4-Difluorobenzene (Surr)* | *77* | | *70 - 130* | *05/10/23 08:58* | *05/10/23 12:28* | *1* |

**Lab Sample ID: LCS 880-53010/1-A** **Client Sample ID: Lab Control Sample**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 53006** **Prep Batch: 53010**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 0.100 | 0.1261 | | mg/Kg | | 126 | 70 - 130 |
| Toluene | 0.100 | 0.1265 | | mg/Kg | | 126 | 70 - 130 |
| Ethylbenzene | 0.100 | 0.1252 | | mg/Kg | | 125 | 70 - 130 |
| m,p-Xylenes | 0.200 | 0.2570 | | mg/Kg | | 129 | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

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

**Lab Sample ID: LCS 880-53010/1-A**
**Matrix: Solid**
**Analysis Batch: 53006**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 53010**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | | | 0.100 | 0.1257 | | mg/Kg | | 126 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *104* | | *70 - 130* |

**Lab Sample ID: LCSD 880-53010/2-A**
**Matrix: Solid**
**Analysis Batch: 53006**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 53010**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1188 | | mg/Kg | | 119 | 70 - 130 | 6 | 35 |
| Toluene | | | 0.100 | 0.1175 | | mg/Kg | | 118 | 70 - 130 | 7 | 35 |
| Ethylbenzene | | | 0.100 | 0.1102 | | mg/Kg | | 110 | 70 - 130 | 13 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2280 | | mg/Kg | | 114 | 70 - 130 | 12 | 35 |
| o-Xylene | | | 0.100 | 0.1113 | | mg/Kg | | 111 | 70 - 130 | 12 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *106* | | *70 - 130* |

**Lab Sample ID: 880-28227-4 MS**
**Matrix: Solid**
**Analysis Batch: 53006**

**Client Sample ID: C-4, 1'**
**Prep Type: Total/NA**
**Prep Batch: 53010**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U F1 | 0.100 | 0.1289 | | mg/Kg | | 128 | 70 - 130 | | |
| Toluene | <0.00201 | U | 0.100 | 0.1203 | | mg/Kg | | 119 | 70 - 130 | | |
| Ethylbenzene | <0.00201 | U | 0.100 | 0.1121 | | mg/Kg | | 112 | 70 - 130 | | |
| m,p-Xylenes | <0.00402 | U | 0.201 | 0.2240 | | mg/Kg | | 112 | 70 - 130 | | |
| o-Xylene | <0.00201 | U | 0.100 | 0.1087 | | mg/Kg | | 108 | 70 - 130 | | |

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

**Lab Sample ID: 880-28227-4 MSD**
**Matrix: Solid**
**Analysis Batch: 53006**

**Client Sample ID: C-4, 1'**
**Prep Type: Total/NA**
**Prep Batch: 53010**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U F1 | 0.0990 | 0.1349 | F1 | mg/Kg | | 136 | 70 - 130 | 5 | 35 |
| Toluene | <0.00201 | U | 0.0990 | 0.1177 | | mg/Kg | | 118 | 70 - 130 | 2 | 35 |
| Ethylbenzene | <0.00201 | U | 0.0990 | 0.1085 | | mg/Kg | | 110 | 70 - 130 | 3 | 35 |
| m,p-Xylenes | <0.00402 | U | 0.198 | 0.2191 | | mg/Kg | | 111 | 70 - 130 | 2 | 35 |
| o-Xylene | <0.00201 | U | 0.0990 | 0.1068 | | mg/Kg | | 108 | 70 - 130 | 2 | 35 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

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

**Lab Sample ID: 880-28227-4 MSD**
**Matrix: Solid**
**Analysis Batch: 53006**

**Client Sample ID: C-4, 1'**
**Prep Type: Total/NA**
**Prep Batch: 53010**

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 102 | | 70 - 130 |
| 1,4-Difluorobenzene (Surr) | 105 | | 70 - 130 |

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

**Lab Sample ID: MB 880-53014/1-A**
**Matrix: Solid**
**Analysis Batch: 52999**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 53014**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/10/23 08:07 | 05/10/23 09:04 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/10/23 08:07 | 05/10/23 09:04 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/10/23 08:07 | 05/10/23 09:04 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1-Chlorooctane (Surr) | 117 | | 70 - 130 | 05/10/23 08:07 | 05/10/23 09:04 | 1 |
| o-Terphenyl (Surr) | 150 | S1+ | 70 - 130 | 05/10/23 08:07 | 05/10/23 09:04 | 1 |

**Lab Sample ID: LCS 880-53014/2-A**
**Matrix: Solid**
**Analysis Batch: 52999**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 53014**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 461.8 | *- | mg/Kg | | 46 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 505.7 | *- | mg/Kg | | 51 | 70 - 130 | | |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 62 | S1- | 70 - 130 |
| o-Terphenyl (Surr) | 74 | | 70 - 130 |

**Lab Sample ID: LCSD 880-53014/3-A**
**Matrix: Solid**
**Analysis Batch: 52999**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 53014**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 448.4 | *- | mg/Kg | | 45 | 70 - 130 | 3 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 405.8 | *- *1 | mg/Kg | | 41 | 70 - 130 | 22 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 50 | S1- | 70 - 130 |
| o-Terphenyl (Surr) | 57 | S1- | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

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

**Lab Sample ID: 880-28227-1 MS**
**Matrix: Solid**
**Analysis Batch: 52999**

**Client Sample ID: C-1, 1'**
**Prep Type: Total/NA**
**Prep Batch: 53014**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U F1 F2 *- | 997 | <49.9 | U F1 | mg/Kg | | 4 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U F1 F2 *- *1 | 997 | <49.9 | U F1 | mg/Kg | | 2 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *2* | *S1-* | *70 - 130* |
| *o-Terphenyl (Surr)* | *0.4* | *S1-* | *70 - 130* |

**Lab Sample ID: 880-28227-1 MSD**
**Matrix: Solid**
**Analysis Batch: 52999**

**Client Sample ID: C-1, 1'**
**Prep Type: Total/NA**
**Prep Batch: 53014**

| 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 F2 *- | 999 | 1268 | F2 | mg/Kg | | 127 | 70 - 130 | 187 | 20 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U F1 F2 *- *1 | 999 | 1418 | F1 F2 | mg/Kg | | 142 | 70 - 130 | 196 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *170* | *S1+* | *70 - 130* |
| *o-Terphenyl (Surr)* | *176* | *S1+* | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-53024/1-A**
**Matrix: Solid**
**Analysis Batch: 53052**

**Client Sample ID: Method Blank**
**Prep Type: Soluble**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 05/10/23 18:31 | 1 |

**Lab Sample ID: LCS 880-53024/2-A**
**Matrix: Solid**
**Analysis Batch: 53052**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 258.3 | | mg/Kg | | 103 | 90 - 110 |

**Lab Sample ID: LCSD 880-53024/3-A**
**Matrix: Solid**
**Analysis Batch: 53052**

**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 | 255.7 | | mg/Kg | | 102 | 90 - 110 | 1 | 20 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 880-28227-1 MS**
**Matrix: Solid**
**Analysis Batch: 53052**

**Client Sample ID: C-1, 1'**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2850 | F1 | 1260 | 3971 | F1 | mg/Kg | | 89 | 90 - 110 |

**Lab Sample ID: 880-28227-1 MSD**
**Matrix: Solid**
**Analysis Batch: 53052**

**Client Sample ID: C-1, 1'**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2850 | F1 | 1260 | 3982 | | mg/Kg | | 90 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 880-28227-11 MS**
**Matrix: Solid**
**Analysis Batch: 53052**

**Client Sample ID: C-11, 0-4.1'**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 748 | | 1240 | 1999 | | mg/Kg | | 101 | 90 - 110 |

**Lab Sample ID: 880-28227-11 MSD**
**Matrix: Solid**
**Analysis Batch: 53052**

**Client Sample ID: C-11, 0-4.1'**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 748 | | 1240 | 2007 | | mg/Kg | | 102 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## GC VOA

### Analysis Batch: 53006

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-4 | C-4, 1' | Total/NA | Solid | 8021B | 53010 |
| 880-28227-5 | C-5, 4' | Total/NA | Solid | 8021B | 53010 |
| 880-28227-6 | C-6, 4' | Total/NA | Solid | 8021B | 53010 |
| 880-28227-7 | C-7, 1.5' | Total/NA | Solid | 8021B | 53010 |
| 880-28227-8 | C-8, 1.5' | Total/NA | Solid | 8021B | 53010 |
| 880-28227-9 | C-9, 4' | Total/NA | Solid | 8021B | 53010 |
| 880-28227-10 | C-10, 0-4.1' | Total/NA | Solid | 8021B | 53010 |
| 880-28227-11 | C-11, 0-4.1' | Total/NA | Solid | 8021B | 53010 |
| 880-28227-12 | C-12, 0-1' | Total/NA | Solid | 8021B | 53010 |
| MB 880-53010/5-A | Method Blank | Total/NA | Solid | 8021B | 53010 |
| LCS 880-53010/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 53010 |
| LCSD 880-53010/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 53010 |
| 880-28227-4 MS | C-4, 1' | Total/NA | Solid | 8021B | 53010 |
| 880-28227-4 MSD | C-4, 1' | Total/NA | Solid | 8021B | 53010 |

### Analysis Batch: 53007

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-1 | C-1, 1' | Total/NA | Solid | 8021B | 53009 |
| 880-28227-2 | C-2, 0-4.1' | Total/NA | Solid | 8021B | 53009 |
| 880-28227-3 | C-3, 1' | Total/NA | Solid | 8021B | 53009 |
| MB 880-53009/5-A | Method Blank | Total/NA | Solid | 8021B | 53009 |
| LCS 880-53009/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 53009 |
| LCSD 880-53009/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 53009 |
| 880-28227-1 MS | C-1, 1' | Total/NA | Solid | 8021B | 53009 |
| 880-28227-1 MSD | C-1, 1' | Total/NA | Solid | 8021B | 53009 |

### Prep Batch: 53009

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-1 | C-1, 1' | Total/NA | Solid | 5035 | |
| 880-28227-2 | C-2, 0-4.1' | Total/NA | Solid | 5035 | |
| 880-28227-3 | C-3, 1' | Total/NA | Solid | 5035 | |
| MB 880-53009/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-53009/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-53009/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-28227-1 MS | C-1, 1' | Total/NA | Solid | 5035 | |
| 880-28227-1 MSD | C-1, 1' | Total/NA | Solid | 5035 | |

### Prep Batch: 53010

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-4 | C-4, 1' | Total/NA | Solid | 5035 | |
| 880-28227-5 | C-5, 4' | Total/NA | Solid | 5035 | |
| 880-28227-6 | C-6, 4' | Total/NA | Solid | 5035 | |
| 880-28227-7 | C-7, 1.5' | Total/NA | Solid | 5035 | |
| 880-28227-8 | C-8, 1.5' | Total/NA | Solid | 5035 | |
| 880-28227-9 | C-9, 4' | Total/NA | Solid | 5035 | |
| 880-28227-10 | C-10, 0-4.1' | Total/NA | Solid | 5035 | |
| 880-28227-11 | C-11, 0-4.1' | Total/NA | Solid | 5035 | |
| 880-28227-12 | C-12, 0-1' | Total/NA | Solid | 5035 | |
| MB 880-53010/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-53010/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-53010/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-28227-1
Project/Site: SD 19 CTB Manifold SDG: 2995

## GC VOA (Continued)

### Prep Batch: 53010 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-4 MS | C-4, 1' | Total/NA | Solid | 5035 | |
| 880-28227-4 MSD | C-4, 1' | Total/NA | Solid | 5035 | |

### Analysis Batch: 53061

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-1 | C-1, 1' | Total/NA | Solid | Total BTEX | |
| 880-28227-2 | C-2, 0-4.1' | Total/NA | Solid | Total BTEX | |
| 880-28227-3 | C-3, 1' | Total/NA | Solid | Total BTEX | |
| 880-28227-4 | C-4, 1' | Total/NA | Solid | Total BTEX | |
| 880-28227-5 | C-5, 4' | Total/NA | Solid | Total BTEX | |
| 880-28227-6 | C-6, 4' | Total/NA | Solid | Total BTEX | |
| 880-28227-7 | C-7, 1.5' | Total/NA | Solid | Total BTEX | |
| 880-28227-8 | C-8, 1.5' | Total/NA | Solid | Total BTEX | |
| 880-28227-9 | C-9, 4' | Total/NA | Solid | Total BTEX | |
| 880-28227-10 | C-10, 0-4.1' | Total/NA | Solid | Total BTEX | |
| 880-28227-11 | C-11, 0-4.1' | Total/NA | Solid | Total BTEX | |
| 880-28227-12 | C-12, 0-1' | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Analysis Batch: 52999

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-1 | C-1, 1' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-2 | C-2, 0-4.1' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-3 | C-3, 1' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-4 | C-4, 1' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-5 | C-5, 4' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-6 | C-6, 4' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-7 | C-7, 1.5' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-8 | C-8, 1.5' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-9 | C-9, 4' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-10 | C-10, 0-4.1' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-11 | C-11, 0-4.1' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-12 | C-12, 0-1' | Total/NA | Solid | 8015B NM | 53014 |
| MB 880-53014/1-A | Method Blank | Total/NA | Solid | 8015B NM | 53014 |
| LCS 880-53014/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 53014 |
| LCSD 880-53014/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-1 MS | C-1, 1' | Total/NA | Solid | 8015B NM | 53014 |
| 880-28227-1 MSD | C-1, 1' | Total/NA | Solid | 8015B NM | 53014 |

### Prep Batch: 53014

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-1 | C-1, 1' | Total/NA | Solid | 8015NM Prep | |
| 880-28227-2 | C-2, 0-4.1' | Total/NA | Solid | 8015NM Prep | |
| 880-28227-3 | C-3, 1' | Total/NA | Solid | 8015NM Prep | |
| 880-28227-4 | C-4, 1' | Total/NA | Solid | 8015NM Prep | |
| 880-28227-5 | C-5, 4' | Total/NA | Solid | 8015NM Prep | |
| 880-28227-6 | C-6, 4' | Total/NA | Solid | 8015NM Prep | |
| 880-28227-7 | C-7, 1.5' | Total/NA | Solid | 8015NM Prep | |
| 880-28227-8 | C-8, 1.5' | Total/NA | Solid | 8015NM Prep | |
| 880-28227-9 | C-9, 4' | Total/NA | Solid | 8015NM Prep | |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-28227-1
Project/Site: SD 19 CTB Manifold SDG: 2995

## GC Semi VOA (Continued)

### Prep Batch: 53014 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-10 | C-10, 0-4.1' | Total/NA | Solid | 8015NM Prep | |
| 880-28227-11 | C-11, 0-4.1' | Total/NA | Solid | 8015NM Prep | |
| 880-28227-12 | C-12, 0-1' | Total/NA | Solid | 8015NM Prep | |
| MB 880-53014/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-53014/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-53014/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-28227-1 MS | C-1, 1' | Total/NA | Solid | 8015NM Prep | |
| 880-28227-1 MSD | C-1, 1' | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 53073

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-1 | C-1, 1' | Total/NA | Solid | 8015 NM | |
| 880-28227-2 | C-2, 0-4.1' | Total/NA | Solid | 8015 NM | |
| 880-28227-3 | C-3, 1' | Total/NA | Solid | 8015 NM | |
| 880-28227-4 | C-4, 1' | Total/NA | Solid | 8015 NM | |
| 880-28227-5 | C-5, 4' | Total/NA | Solid | 8015 NM | |
| 880-28227-6 | C-6, 4' | Total/NA | Solid | 8015 NM | |
| 880-28227-7 | C-7, 1.5' | Total/NA | Solid | 8015 NM | |
| 880-28227-8 | C-8, 1.5' | Total/NA | Solid | 8015 NM | |
| 880-28227-9 | C-9, 4' | Total/NA | Solid | 8015 NM | |
| 880-28227-10 | C-10, 0-4.1' | Total/NA | Solid | 8015 NM | |
| 880-28227-11 | C-11, 0-4.1' | Total/NA | Solid | 8015 NM | |
| 880-28227-12 | C-12, 0-1' | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 53024

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-1 | C-1, 1' | Soluble | Solid | DI Leach | |
| 880-28227-2 | C-2, 0-4.1' | Soluble | Solid | DI Leach | |
| 880-28227-3 | C-3, 1' | Soluble | Solid | DI Leach | |
| 880-28227-4 | C-4, 1' | Soluble | Solid | DI Leach | |
| 880-28227-5 | C-5, 4' | Soluble | Solid | DI Leach | |
| 880-28227-6 | C-6, 4' | Soluble | Solid | DI Leach | |
| 880-28227-7 | C-7, 1.5' | Soluble | Solid | DI Leach | |
| 880-28227-8 | C-8, 1.5' | Soluble | Solid | DI Leach | |
| 880-28227-9 | C-9, 4' | Soluble | Solid | DI Leach | |
| 880-28227-10 | C-10, 0-4.1' | Soluble | Solid | DI Leach | |
| 880-28227-11 | C-11, 0-4.1' | Soluble | Solid | DI Leach | |
| 880-28227-12 | C-12, 0-1' | Soluble | Solid | DI Leach | |
| MB 880-53024/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-53024/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-53024/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-28227-1 MS | C-1, 1' | Soluble | Solid | DI Leach | |
| 880-28227-1 MSD | C-1, 1' | Soluble | Solid | DI Leach | |
| 880-28227-11 MS | C-11, 0-4.1' | Soluble | Solid | DI Leach | |
| 880-28227-11 MSD | C-11, 0-4.1' | Soluble | Solid | DI Leach | |

### Analysis Batch: 53052

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-1 | C-1, 1' | Soluble | Solid | 300.0 | 53024 |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-28227-1
Project/Site: SD 19 CTB Manifold SDG: 2995

## HPLC/IC (Continued)

### Analysis Batch: 53052 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28227-2 | C-2, 0-4.1' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-3 | C-3, 1' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-4 | C-4, 1' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-5 | C-5, 4' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-6 | C-6, 4' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-7 | C-7, 1.5' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-8 | C-8, 1.5' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-9 | C-9, 4' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-10 | C-10, 0-4.1' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-11 | C-11, 0-4.1' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-12 | C-12, 0-1' | Soluble | Solid | 300.0 | 53024 |
| MB 880-53024/1-A | Method Blank | Soluble | Solid | 300.0 | 53024 |
| LCS 880-53024/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 53024 |
| LCSD 880-53024/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 53024 |
| 880-28227-1 MS | C-1, 1' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-1 MSD | C-1, 1' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-11 MS | C-11, 0-4.1' | Soluble | Solid | 300.0 | 53024 |
| 880-28227-11 MSD | C-11, 0-4.1' | Soluble | Solid | 300.0 | 53024 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Client Sample ID: C-1, 1'
**Date Collected: 05/09/23 08:00**
**Date Received: 05/10/23 08:23**

## Lab Sample ID: 880-28227-1
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 53009 | 05/10/23 08:56 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53007 | 05/10/23 12:31 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/10/23 16:42 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 11:35 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.97 g | 50 mL | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | 50 mL | 50 mL | 53052 | 05/10/23 18:47 | SMC | EET MID |

## Client Sample ID: C-2, 0-4.1'
**Date Collected: 05/09/23 08:05**
**Date Received: 05/10/23 08:23**

## Lab Sample ID: 880-28227-2
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 53009 | 05/10/23 08:56 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53007 | 05/10/23 17:24 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/11/23 12:57 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 12:40 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.04 g | 50 mL | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 20 | 50 mL | 50 mL | 53052 | 05/10/23 19:02 | SMC | EET MID |

## Client Sample ID: C-3, 1'
**Date Collected: 05/09/23 08:10**
**Date Received: 05/10/23 08:23**

## Lab Sample ID: 880-28227-3
**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 | | | 5.02 g | 5 mL | 53009 | 05/10/23 08:56 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53007 | 05/10/23 17:44 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/11/23 12:57 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 13:02 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 10 | 50 mL | 50 mL | 53052 | 05/10/23 19:08 | SMC | EET MID |

## Client Sample ID: C-4, 1'
**Date Collected: 05/09/23 08:15**
**Date Received: 05/10/23 08:23**

## Lab Sample ID: 880-28227-4
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.97 g | 5 mL | 53010 | 05/10/23 08:58 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53006 | 05/10/23 12:50 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/10/23 16:44 | SM | EET MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Client Sample ID: C-4, 1'
**Date Collected: 05/09/23 08:15**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-4**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 13:24 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 20 | 50 mL | 50 mL | 53052 | 05/10/23 19:13 | SMC | EET MID |

## Client Sample ID: C-5, 4'
**Date Collected: 05/09/23 08:20**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-5**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.95 g | 5 mL | 53010 | 05/10/23 08:58 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53006 | 05/10/23 17:17 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/11/23 13:01 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 13:46 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 53052 | 05/10/23 19:18 | SMC | EET MID |

## Client Sample ID: C-6, 4'
**Date Collected: 05/09/23 08:25**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-6**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.02 g | 5 mL | 53010 | 05/10/23 08:58 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53006 | 05/10/23 17:38 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/11/23 13:01 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 14:08 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | 50 mL | 50 mL | 53052 | 05/10/23 19:34 | SMC | EET MID |

## Client Sample ID: C-7, 1.5'
**Date Collected: 05/09/23 08:30**
**Date Received: 05/10/23 08:23**

**Lab Sample ID: 880-28227-7**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 53010 | 05/10/23 08:58 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53006 | 05/10/23 17:58 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/11/23 13:01 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 14:29 | SM | EET MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Client Sample ID: C-7, 1.5'
**Lab Sample ID: 880-28227-7**
**Date Collected: 05/09/23 08:30**
**Matrix: Solid**
**Date Received: 05/10/23 08:23**

| 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 | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | 50 mL | 50 mL | 53052 | 05/10/23 19:39 | SMC | EET MID |

## Client Sample ID: C-8, 1.5'
**Lab Sample ID: 880-28227-8**
**Date Collected: 05/09/23 08:35**
**Matrix: Solid**
**Date Received: 05/10/23 08:23**

| 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 | 53010 | 05/10/23 08:58 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53006 | 05/10/23 18:19 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/11/23 13:01 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 14:51 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | 50 mL | 50 mL | 53052 | 05/10/23 19:44 | SMC | EET MID |

## Client Sample ID: C-9, 4'
**Lab Sample ID: 880-28227-9**
**Date Collected: 05/09/23 09:00**
**Matrix: Solid**
**Date Received: 05/10/23 08:23**

| 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 | 53010 | 05/10/23 08:58 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53006 | 05/10/23 18:39 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/11/23 13:01 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 15:13 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | 50 mL | 50 mL | 53052 | 05/10/23 19:50 | SMC | EET MID |

## Client Sample ID: C-10, 0-4.1'
**Lab Sample ID: 880-28227-10**
**Date Collected: 05/09/23 09:10**
**Matrix: Solid**
**Date Received: 05/10/23 08:23**

| 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 | 53010 | 05/10/23 08:58 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53006 | 05/10/23 19:00 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/11/23 13:01 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.05 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 15:34 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | 50 mL | 50 mL | 53052 | 05/10/23 19:55 | SMC | EET MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

## Client Sample ID: C-11, 0-4.1'

**Date Collected: 05/09/23 09:20**
**Date Received: 05/10/23 08:23**

## Lab Sample ID: 880-28227-11

**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 | 53010 | 05/10/23 08:58 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53006 | 05/10/23 19:20 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/11/23 13:01 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 16:17 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | 50 mL | 50 mL | 53052 | 05/10/23 20:00 | SMC | EET MID |

## Client Sample ID: C-12, 0-1'

**Date Collected: 05/09/23 09:30**
**Date Received: 05/10/23 08:23**

## Lab Sample ID: 880-28227-12

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 53010 | 05/10/23 08:58 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53006 | 05/10/23 19:40 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53061 | 05/11/23 13:01 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53073 | 05/10/23 19:35 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 53014 | 05/10/23 10:07 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52999 | 05/10/23 16:38 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.97 g | 50 mL | 53024 | 05/10/23 10:31 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | 50 mL | 50 mL | 53052 | 05/10/23 20:16 | SMC | EET MID |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-28227-1
Project/Site: SD 19 CTB Manifold SDG: 2995

## Laboratory: Eurofins Midland

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

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Texas | NELAP | T104704400-22-25 | 06-30-23 |

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

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

# Method Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

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

**Protocol References:**

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-28227-1
SDG: 2995

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-28227-1 | C-1, 1' | Solid | 05/09/23 08:00 | 05/10/23 08:23 |
| 880-28227-2 | C-2, 0-4.1' | Solid | 05/09/23 08:05 | 05/10/23 08:23 |
| 880-28227-3 | C-3, 1' | Solid | 05/09/23 08:10 | 05/10/23 08:23 |
| 880-28227-4 | C-4, 1' | Solid | 05/09/23 08:15 | 05/10/23 08:23 |
| 880-28227-5 | C-5, 4' | Solid | 05/09/23 08:20 | 05/10/23 08:23 |
| 880-28227-6 | C-6, 4' | Solid | 05/09/23 08:25 | 05/10/23 08:23 |
| 880-28227-7 | C-7, 1.5' | Solid | 05/09/23 08:30 | 05/10/23 08:23 |
| 880-28227-8 | C-8, 1.5' | Solid | 05/09/23 08:35 | 05/10/23 08:23 |
| 880-28227-9 | C-9, 4' | Solid | 05/09/23 09:00 | 05/10/23 08:23 |
| 880-28227-10 | C-10, 0-4.1' | Solid | 05/09/23 09:10 | 05/10/23 08:23 |
| 880-28227-11 | C-11, 0-4.1' | Solid | 05/09/23 09:20 | 05/10/23 08:23 |
| 880-28227-12 | C-12, 0-1' | Solid | 05/09/23 09:30 | 05/10/23 08:23 |

Released to Imaging: 12/5/2023 1:12:27 PM
Received by OCD: 8/23/2023 10:40:52 AM

20227

No. 2995

# CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to

DATE 5-9-23 PAGE 1 OF 1

PO# LAB WORK ORDER#.

PROJECT LOCATION OR NAME SD 19 CTB Manifold

LAI PROJECT # 22-0105-04 COLLECTOR KG

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State Mnt / NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

| Field Sample I D | Lab # | Date | Time | Matrix | # of Containers | PRESERVATION: HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | ANALYSES | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C-1 1' | | 5-9-23 | 0800 | S | 1 | | | | X | | X X X X X | 202 |
| C-2, 0-4.1' | | | 0805 | | 1 | | | | | | | |
| C-3, 1' | | | 0810 | | | | | | | | | |
| C-4, 1' | | | 0815 | | | | | | | | | |
| C-5, 4' | | | 0820 | | | | | | | | | |
| C-6, 4' | | | 0825 | | | | | | | | | |
| C-7, 1.5' | | | 0830 | | | | | | | | | |
| C-8, 1.5' | | | 0835 | | | | | | | | | |
| C-9, 4' | | | 0900 | | | | | | | | | |
| C-10, 0-4.1' | | | 0910 | | | | | | | | | |
| C-11, 0-4.1' | | | 0920 | | | | | | | | | |
| C-12, 0-1' | | | 0930 | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | | | |

ANALYSES: BTEX ☐ MTBE ☐ TRPH 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 ☐ 8082 PCBS ☐ TCLP - METALS (RCRA) ☐ TCLP VOC ☐ TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

880-28227 Chain of Custody

| | | |
|---|---|---|
| RELINQUISHED BY (Signature) | DATE/TIME 5-10-23 823 | RECEIVED BY (Signature) |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
| LABORATORY Xenco | | |

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

**LABORATORY USE ONLY:**
RECEIVING TEMP -9.2/-8.9 THERM# IR8 -36
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL #
☒ HAND DELIVERED

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-28227-1
SDG Number: 2995

**Login Number: 28227**
**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 | |

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 5/22/2023 3:58:55 PM

## JOB DESCRIPTION

SD 19 CTB Manifield
SDG NUMBER 21-0105-04

## JOB NUMBER

880-28403-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.



Released to Imaging: 12/5/2023 1:12:27 PM

my EOL

# Eurofins Midland

## Job Notes

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

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

## Authorization

Holly Taylor

Generated
5/22/2023 3:58:55 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Laboratory Job ID: 880-28403-1
SDG: 21-0105-04

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# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-28403-1
Project/Site: SD 19 CTB Manifield SDG: 21-0105-04

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

## Job ID: 880-28403-1

**Laboratory: Eurofins Midland**

**Narrative**

**Job Narrative**
**880-28403-1**

**Receipt**
The samples were received on 5/15/2023 8:33 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 -6.6°C

**GC VOA**
Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-53575 and analytical batch 880-53791 recovered outside control limits for the following analytes: Benzene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-53575 and analytical batch 880-53791 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

**GC Semi VOA**
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53468 and analytical batch 880-53448 was outside the upper control limits.

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

**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: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

## Client Sample ID: BF-2

**Date Collected: 05/11/23 12:00**
**Date Received: 05/15/23 08:33**

**Lab Sample ID: 880-28403-1**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U *+ F1 | 0.00198 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:33 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:33 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:33 | 1 |
| m,p-Xylenes | <0.00396 | U | 0.00396 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:33 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:33 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:33 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *79* | | *70 - 130* | *05/17/23 10:45* | *05/20/23 19:33* | *1* |
| *1,4-Difluorobenzene (Surr)* | *95* | | *70 - 130* | *05/17/23 10:45* | *05/20/23 19:33* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 05/22/23 12:48 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/17/23 11:56 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/16/23 11:44 | 05/17/23 02:10 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/16/23 11:44 | 05/17/23 02:10 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/16/23 11:44 | 05/17/23 02:10 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *122* | | *70 - 130* | *05/16/23 11:44* | *05/17/23 02:10* | *1* |
| *o-Terphenyl (Surr)* | *91* | | *70 - 130* | *05/16/23 11:44* | *05/17/23 02:10* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **364** | | 4.98 | | mg/Kg | | | 05/17/23 13:27 | 1 |

## Client Sample ID: BF-4

**Date Collected: 05/11/23 12:05**
**Date Received: 05/15/23 08:33**

**Lab Sample ID: 880-28403-2**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U *+ | 0.00199 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:54 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:54 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:54 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:54 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:54 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:54 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *70 - 130* | *05/17/23 10:45* | *05/20/23 19:54* | *1* |
| *1,4-Difluorobenzene (Surr)* | *88* | | *70 - 130* | *05/17/23 10:45* | *05/20/23 19:54* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

## Client Sample ID: BF-4

**Date Collected: 05/11/23 12:05**
**Date Received: 05/15/23 08:33**

**Lab Sample ID: 880-28403-2**
**Matrix: Solid**

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 05/22/23 12:48 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/17/23 11:56 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/16/23 11:44 | 05/17/23 02:32 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/16/23 11:44 | 05/17/23 02:32 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/16/23 11:44 | 05/17/23 02:32 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *117* | | *70 - 130* | *05/16/23 11:44* | *05/17/23 02:32* | *1* |
| *o-Terphenyl (Surr)* | *86* | | *70 - 130* | *05/16/23 11:44* | *05/17/23 02:32* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **220** | | 4.96 | | mg/Kg | | | 05/17/23 13:33 | 1 |

## Client Sample ID: BF-5

**Date Collected: 05/11/23 12:10**
**Date Received: 05/15/23 08:33**

**Lab Sample ID: 880-28403-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U *+ | 0.00200 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 20:14 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 20:14 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 20:14 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 20:14 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 20:14 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 20:14 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | *05/17/23 10:45* | *05/20/23 20:14* | *1* |
| *1,4-Difluorobenzene (Surr)* | *85* | | *70 - 130* | *05/17/23 10:45* | *05/20/23 20:14* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 05/22/23 12:48 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/17/23 11:56 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/16/23 11:44 | 05/17/23 02:53 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/16/23 11:44 | 05/17/23 02:53 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

**Client Sample ID: BF-5**
**Date Collected: 05/11/23 12:10**
**Date Received: 05/15/23 08:33**

**Lab Sample ID: 880-28403-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/16/23 11:44 | 05/17/23 02:53 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *120* | | *70 - 130* | *05/16/23 11:44* | *05/17/23 02:53* | *1* |
| *o-Terphenyl (Surr)* | *89* | | *70 - 130* | *05/16/23 11:44* | *05/17/23 02:53* | *1* |

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **183** | | 5.00 | | mg/Kg | | | 05/17/23 13:38 | 1 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | BFB1 | DFBZ1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-28403-1 | BF-2 | 79 | 95 |
| 880-28403-1 MS | BF-2 | 96 | 118 |
| 880-28403-1 MSD | BF-2 | 97 | 101 |
| 880-28403-2 | BF-4 | 87 | 88 |
| 880-28403-3 | BF-5 | 96 | 85 |
| LCS 880-53575/1-A | Lab Control Sample | 89 | 107 |
| LCSD 880-53575/2-A | Lab Control Sample Dup | 94 | 116 |
| MB 880-53575/5-A | Method Blank | 88 | 110 |
| MB 880-53741/5-A | Method Blank | 91 | 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) | |
|---|---|---|---|
| | | 1CO1 | OTPH1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-28403-1 | BF-2 | 122 | 91 |
| 880-28403-2 | BF-4 | 117 | 86 |
| 880-28403-3 | BF-5 | 120 | 89 |
| LCS 880-53468/2-A | Lab Control Sample | 104 | 83 |
| LCSD 880-53468/3-A | Lab Control Sample Dup | 103 | 79 |
| MB 880-53468/1-A | Method Blank | 191 S1+ | 156 S1+ |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

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

**Lab Sample ID: MB 880-53575/5-A**
**Matrix: Solid**
**Analysis Batch: 53791**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 53575**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:04 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:04 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:04 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:04 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:04 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 05/17/23 10:45 | 05/20/23 19:04 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *88* | | *70 - 130* | *05/17/23 10:45* | *05/20/23 19:04* | *1* |
| *1,4-Difluorobenzene (Surr)* | *110* | | *70 - 130* | *05/17/23 10:45* | *05/20/23 19:04* | *1* |

**Lab Sample ID: LCS 880-53575/1-A**
**Matrix: Solid**
**Analysis Batch: 53791**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 53575**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1303 | | mg/Kg | | 130 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1118 | | mg/Kg | | 112 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.09809 | | mg/Kg | | 98 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.1903 | | mg/Kg | | 95 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.08702 | | mg/Kg | | 87 | 70 - 130 | | |

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

**Lab Sample ID: LCSD 880-53575/2-A**
**Matrix: Solid**
**Analysis Batch: 53791**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 53575**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1383 | *+ | mg/Kg | | 138 | 70 - 130 | 6 | 35 |
| Toluene | | | 0.100 | 0.1191 | | mg/Kg | | 119 | 70 - 130 | 6 | 35 |
| Ethylbenzene | | | 0.100 | 0.1042 | | mg/Kg | | 104 | 70 - 130 | 6 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2069 | | mg/Kg | | 103 | 70 - 130 | 8 | 35 |
| o-Xylene | | | 0.100 | 0.09573 | | mg/Kg | | 96 | 70 - 130 | 10 | 35 |

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

**Lab Sample ID: 880-28403-1 MS**
**Matrix: Solid**
**Analysis Batch: 53791**

**Client Sample ID: BF-2**
**Prep Type: Total/NA**
**Prep Batch: 53575**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U *+ F1 | 0.0990 | 0.1239 | | mg/Kg | | 125 | 70 - 130 | | |
| Toluene | <0.00198 | U | 0.0990 | 0.1040 | | mg/Kg | | 105 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

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

**Lab Sample ID: 880-28403-1 MS**
**Matrix: Solid**
**Analysis Batch: 53791**

**Client Sample ID: BF-2**
**Prep Type: Total/NA**
**Prep Batch: 53575**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | <0.00198 | U | 0.0990 | 0.09380 | | mg/Kg | | 95 | 70 - 130 |
| m,p-Xylenes | <0.00396 | U | 0.198 | 0.1909 | | mg/Kg | | 96 | 70 - 130 |
| o-Xylene | <0.00198 | U | 0.0990 | 0.08821 | | mg/Kg | | 89 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *118* | | *70 - 130* |

**Lab Sample ID: 880-28403-1 MSD**
**Matrix: Solid**
**Analysis Batch: 53791**

**Client Sample ID: BF-2**
**Prep Type: Total/NA**
**Prep Batch: 53575**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U *+ F1 | 0.100 | 0.1354 | F1 | mg/Kg | | 135 | 70 - 130 | 9 | 35 |
| Toluene | <0.00198 | U | 0.100 | 0.1068 | | mg/Kg | | 107 | 70 - 130 | 3 | 35 |
| Ethylbenzene | <0.00198 | U | 0.100 | 0.1025 | | mg/Kg | | 102 | 70 - 130 | 9 | 35 |
| m,p-Xylenes | <0.00396 | U | 0.200 | 0.2187 | | mg/Kg | | 109 | 70 - 130 | 14 | 35 |
| o-Xylene | <0.00198 | U | 0.100 | 0.1006 | | mg/Kg | | 100 | 70 - 130 | 13 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *101* | | *70 - 130* |

**Lab Sample ID: MB 880-53741/5-A**
**Matrix: Solid**
**Analysis Batch: 53791**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 53741**

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | mg/Kg | | 05/19/23 09:45 | 05/20/23 07:28 | 1 |
| Toluene | <0.00200 | U | 0.00200 | mg/Kg | | 05/19/23 09:45 | 05/20/23 07:28 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | mg/Kg | | 05/19/23 09:45 | 05/20/23 07:28 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | mg/Kg | | 05/19/23 09:45 | 05/20/23 07:28 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | mg/Kg | | 05/19/23 09:45 | 05/20/23 07:28 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | mg/Kg | | 05/19/23 09:45 | 05/20/23 07:28 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *91* | | *70 - 130* | *05/19/23 09:45* | *05/20/23 07:28* | *1* |
| *1,4-Difluorobenzene (Surr)* | *95* | | *70 - 130* | *05/19/23 09:45* | *05/20/23 07:28* | *1* |

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

**Lab Sample ID: MB 880-53468/1-A**
**Matrix: Solid**
**Analysis Batch: 53448**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 53468**

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | mg/Kg | | 05/16/23 11:44 | 05/16/23 19:50 | 1 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

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

**Lab Sample ID: MB 880-53468/1-A**
**Matrix: Solid**
**Analysis Batch: 53448**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 53468**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 05/16/23 11:44 | 05/16/23 19:50 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 05/16/23 11:44 | 05/16/23 19:50 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *191* | *S1+* | *70 - 130* | *05/16/23 11:44* | *05/16/23 19:50* | *1* |
| *o-Terphenyl (Surr)* | *156* | *S1+* | *70 - 130* | *05/16/23 11:44* | *05/16/23 19:50* | *1* |

**Lab Sample ID: LCS 880-53468/2-A**
**Matrix: Solid**
**Analysis Batch: 53448**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 53468**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 900.4 | | mg/Kg | | 90 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 949.6 | | mg/Kg | | 95 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *104* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *83* | | *70 - 130* |

**Lab Sample ID: LCSD 880-53468/3-A**
**Matrix: Solid**
**Analysis Batch: 53448**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 53468**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 999 | 843.8 | | mg/Kg | | 84 | 70 - 130 | 6 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 999 | 890.3 | | mg/Kg | | 89 | 70 - 130 | 6 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *103* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *79* | | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-53366/1-A**
**Matrix: Solid**
**Analysis Batch: 53577**

**Client Sample ID: Method Blank**
**Prep Type: Soluble**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 05/17/23 12:50 | 1 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 880-53366/2-A**
**Matrix: Solid**
**Analysis Batch: 53577**

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

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

**Lab Sample ID: LCSD 880-53366/3-A**
**Matrix: Solid**
**Analysis Batch: 53577**

**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 | 250.8 | | mg/Kg | | 100 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

## GC VOA

### Prep Batch: 53575

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28403-1 | BF-2 | Total/NA | Solid | 5035 | |
| 880-28403-2 | BF-4 | Total/NA | Solid | 5035 | |
| 880-28403-3 | BF-5 | Total/NA | Solid | 5035 | |
| MB 880-53575/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-53575/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-53575/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-28403-1 MS | BF-2 | Total/NA | Solid | 5035 | |
| 880-28403-1 MSD | BF-2 | Total/NA | Solid | 5035 | |

### Prep Batch: 53741

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-53741/5-A | Method Blank | Total/NA | Solid | 5035 | |

### Analysis Batch: 53791

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28403-1 | BF-2 | Total/NA | Solid | 8021B | 53575 |
| 880-28403-2 | BF-4 | Total/NA | Solid | 8021B | 53575 |
| 880-28403-3 | BF-5 | Total/NA | Solid | 8021B | 53575 |
| MB 880-53575/5-A | Method Blank | Total/NA | Solid | 8021B | 53575 |
| MB 880-53741/5-A | Method Blank | Total/NA | Solid | 8021B | 53741 |
| LCS 880-53575/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 53575 |
| LCSD 880-53575/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 53575 |
| 880-28403-1 MS | BF-2 | Total/NA | Solid | 8021B | 53575 |
| 880-28403-1 MSD | BF-2 | Total/NA | Solid | 8021B | 53575 |

### Analysis Batch: 53892

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28403-1 | BF-2 | Total/NA | Solid | Total BTEX | |
| 880-28403-2 | BF-4 | Total/NA | Solid | Total BTEX | |
| 880-28403-3 | BF-5 | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Analysis Batch: 53448

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28403-1 | BF-2 | Total/NA | Solid | 8015B NM | 53468 |
| 880-28403-2 | BF-4 | Total/NA | Solid | 8015B NM | 53468 |
| 880-28403-3 | BF-5 | Total/NA | Solid | 8015B NM | 53468 |
| MB 880-53468/1-A | Method Blank | Total/NA | Solid | 8015B NM | 53468 |
| LCS 880-53468/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 53468 |
| LCSD 880-53468/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 53468 |

### Prep Batch: 53468

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28403-1 | BF-2 | Total/NA | Solid | 8015NM Prep | |
| 880-28403-2 | BF-4 | Total/NA | Solid | 8015NM Prep | |
| 880-28403-3 | BF-5 | Total/NA | Solid | 8015NM Prep | |
| MB 880-53468/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-53468/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-53468/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

## GC Semi VOA

### Analysis Batch: 53590

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28403-1 | BF-2 | Total/NA | Solid | 8015 NM | |
| 880-28403-2 | BF-4 | Total/NA | Solid | 8015 NM | |
| 880-28403-3 | BF-5 | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 53366

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28403-1 | BF-2 | Soluble | Solid | DI Leach | |
| 880-28403-2 | BF-4 | Soluble | Solid | DI Leach | |
| 880-28403-3 | BF-5 | Soluble | Solid | DI Leach | |
| MB 880-53366/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-53366/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-53366/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |

### Analysis Batch: 53577

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-28403-1 | BF-2 | Soluble | Solid | 300.0 | 53366 |
| 880-28403-2 | BF-4 | Soluble | Solid | 300.0 | 53366 |
| 880-28403-3 | BF-5 | Soluble | Solid | 300.0 | 53366 |
| MB 880-53366/1-A | Method Blank | Soluble | Solid | 300.0 | 53366 |
| LCS 880-53366/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 53366 |
| LCSD 880-53366/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 53366 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

## Client Sample ID: BF-2

**Date Collected: 05/11/23 12:00**
**Date Received: 05/15/23 08:33**

**Lab Sample ID: 880-28403-1**
**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 | | | 5.05 g | 5 mL | 53575 | 05/17/23 10:45 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53791 | 05/20/23 19:33 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53892 | 05/22/23 12:48 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53590 | 05/17/23 11:56 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 53468 | 05/16/23 11:44 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 53448 | 05/17/23 02:10 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 53366 | 05/17/23 11:48 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 53577 | 05/17/23 13:27 | CH | EET MID |

## Client Sample ID: BF-4

**Date Collected: 05/11/23 12:05**
**Date Received: 05/15/23 08:33**

**Lab Sample ID: 880-28403-2**
**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 | | | 5.03 g | 5 mL | 53575 | 05/17/23 10:45 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53791 | 05/20/23 19:54 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53892 | 05/22/23 12:48 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53590 | 05/17/23 11:56 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 53468 | 05/16/23 11:44 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 53448 | 05/17/23 02:32 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.04 g | 50 mL | 53366 | 05/17/23 11:48 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 53577 | 05/17/23 13:33 | CH | EET MID |

## Client Sample ID: BF-5

**Date Collected: 05/11/23 12:10**
**Date Received: 05/15/23 08:33**

**Lab Sample ID: 880-28403-3**
**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 | | | 5.01 g | 5 mL | 53575 | 05/17/23 10:45 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 53791 | 05/20/23 20:14 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 53892 | 05/22/23 12:48 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 53590 | 05/17/23 11:56 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 53468 | 05/16/23 11:44 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 53448 | 05/17/23 02:53 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 53366 | 05/17/23 11:48 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 53577 | 05/17/23 13:38 | CH | EET MID |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-28403-1
Project/Site: SD 19 CTB Manifield SDG: 21-0105-04

## Laboratory: Eurofins Midland

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

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Texas | NELAP | T104704400-22-25 | 06-30-23 |

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

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

# Method Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

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

**Protocol References:**

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifield

Job ID: 880-28403-1
SDG: 21-0105-04

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-28403-1 | BF-2 | Solid | 05/11/23 12:00 | 05/15/23 08:33 |
| 880-28403-2 | BF-4 | Solid | 05/11/23 12:05 | 05/15/23 08:33 |
| 880-28403-3 | BF-5 | Solid | 05/11/23 12:10 | 05/15/23 08:33 |

Released to Imaging: 12/5/2023 1:12:27 PM
Received by OCD: 8/23/2023 10:40:52 AM

28403 No. 2999

# CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to

DATE 5-15-23 PAGE 1 OF 1
PO# LAB WORK ORDER#
PROJECT LOCATION OR NAME SD 19 CTB Manifold
LAI PROJECT # 22-0105-04 COLLECTOR KG

TRRP report? ☐ Yes ☒ No

TIME ZONE
Time zone/State MNT/NM

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

| Field Sample I D | Lab # | Date | Time | Matrix | # of Containers | PRESERVATION HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | ANALYSES | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BF-2 | | 5-11-23 | 1200 | S | 1 | | | | X | | X X X X X | 202 |
| BF-4 | | 5-11-23 | 1205 | S | 1 | | | | X | | X X X X X | |
| BF-5 | | 5-11-23 | 1210 | S | 1 | | | | X | | X X X X X | |

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 ☐ 8082 PCBS ☐ TCLP - METALS (RCRA) ☐ TCLP VOC ☐ TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

TOTAL

RELINQUISHED BY (Signature) DATE/TIME 5/15/23 0833 RECEIVED BY (Signature)
RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature)
RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature)
LABORATORY Xenco

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

LABORATORY USE ONLY:
RECEIVING TEMP 6.9/6.6 THERM# IR8-36
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

880-28403 Chain of Custody

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-28403-1
SDG Number: 21-0105-04

**Login Number: 28403**
**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 | |

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 7/27/2023 6:19:17 PM

## JOB DESCRIPTION

Salado Draw 19 CTB
SDG NUMBER 22-0105-04

## JOB NUMBER

880-31083-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.



Released to Imaging: 12/5/2023 1:12:27 PM

my EOL

# Eurofins Midland

## Job Notes

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

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

## Authorization

Holly Taylor

Generated
7/27/2023 6:19:17 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Laboratory Job ID: 880-31083-1
SDG: 22-0105-04

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# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-31083-1
Project/Site: Salado Draw 19 CTB SDG: 22-0105-04

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## Job ID: 880-31083-1

**Laboratory: Eurofins Midland**

**Narrative**

**Job Narrative**
**880-31083-1**

**Receipt**
The samples were received on 7/24/2023 8:44 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 -3.2°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: C-1, 4.1' (880-31083-1), C-3, 4.1' (880-31083-2), C-4, 4.1' (880-31083-3), C-7, 4.1' (880-31083-4), C-12, 0-4.1' (880-31083-5), C-8, 4.1' (880-31083-6), C-11, 0-4.1' (880-31083-7) and C-10, 0-4.1' (880-31083-8).

**GC VOA**
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58304 recovered above the upper control limit for m,p-Xylenes and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-58304/2).

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58304 recovered above the upper control limit for Toluene and m,p-Xylenes. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-58304/33).

Method 8021B: The laboratory control sample (LCS) for preparation batch 880-58376 and analytical batch 880-58304 recovered outside control limits for the following analytes: Benzene. Since only an acceptable LCS or LCSD is required per the method, the LCSD shows recovery for the batch and the data has been qualified and reported.

Method 8021B: Surrogate recovery for the following samples were outside control limits: C-12, 0-4.1' (880-31083-5) and C-8, 4.1' (880-31083-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

**GC Semi VOA**
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: C-7, 4.1' (880-31083-4). Evidence of matrix interferences is not obvious.

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

**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: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## Client Sample ID: C-1, 4.1'

**Date Collected: 07/20/23 10:00**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-1**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U *+ | 0.00199 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:24 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:24 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:24 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:24 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:24 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *75* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 03:24* | *1* |
| *1,4-Difluorobenzene (Surr)* | *73* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 03:24* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 07/25/23 10:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.1 | U | 50.1 | | mg/Kg | | | 07/27/23 16:57 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.1 | U | 50.1 | | mg/Kg | | 07/24/23 10:38 | 07/27/23 14:23 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.1 | U | 50.1 | | mg/Kg | | 07/24/23 10:38 | 07/27/23 14:23 | 1 |
| OII Range Organics (Over C28-C36) | <50.1 | U | 50.1 | | mg/Kg | | 07/24/23 10:38 | 07/27/23 14:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *85* | | *70 - 130* | *07/24/23 10:38* | *07/27/23 14:23* | *1* |
| *o-Terphenyl (Surr)* | *101* | | *70 - 130* | *07/24/23 10:38* | *07/27/23 14:23* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **1290** | | 25.0 | | mg/Kg | | | 07/24/23 18:18 | 5 |

## Client Sample ID: C-3, 4.1'

**Date Collected: 07/20/23 10:10**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-2**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U *+ | 0.00198 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:44 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:44 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:44 | 1 |
| m,p-Xylenes | <0.00396 | U | 0.00396 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:44 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:44 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 03:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *83* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 03:44* | *1* |
| *1,4-Difluorobenzene (Surr)* | *70* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 03:44* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## Client Sample ID: C-3, 4.1'

**Date Collected: 07/20/23 10:10**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-2**
**Matrix: Solid**

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 07/25/23 10:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.8 | U | 49.8 | | mg/Kg | | | 07/27/23 16:57 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.8 | U | 49.8 | | mg/Kg | | 07/24/23 10:38 | 07/27/23 14:45 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 07/24/23 10:38 | 07/27/23 14:45 | 1 |
| OII Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 07/24/23 10:38 | 07/27/23 14:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *91* | | *70 - 130* | *07/24/23 10:38* | *07/27/23 14:45* | *1* |
| *o-Terphenyl (Surr)* | *111* | | *70 - 130* | *07/24/23 10:38* | *07/27/23 14:45* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **1830** | | 24.9 | | mg/Kg | | | 07/24/23 18:24 | 5 |

## Client Sample ID: C-4, 4.1'

**Date Collected: 07/20/23 10:20**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U *+ | 0.00201 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:05 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:05 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:05 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:05 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:05 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 04:05* | *1* |
| *1,4-Difluorobenzene (Surr)* | *97* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 04:05* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | | mg/Kg | | | 07/25/23 10:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.7 | U | 49.7 | | mg/Kg | | | 07/27/23 16:57 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.7 | U | 49.7 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 15:07 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.7 | U | 49.7 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 15:07 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## Client Sample ID: C-4, 4.1'

**Date Collected: 07/20/23 10:20**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-3**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| OII Range Organics (Over C28-C36) | <49.7 | U | 49.7 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 15:07 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *99* | | *70 - 130* | *07/24/23 11:35* | *07/27/23 15:07* | *1* |
| *o-Terphenyl (Surr)* | *117* | | *70 - 130* | *07/24/23 11:35* | *07/27/23 15:07* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **536** | | 4.97 | | mg/Kg | | | 07/24/23 18:39 | 1 |

## Client Sample ID: C-7, 4.1'

**Date Collected: 07/21/23 08:00**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-4**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U *+ | 0.00202 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:25 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:25 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:25 | 1 |
| m,p-Xylenes | <0.00403 | U | 0.00403 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:25 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:25 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:25 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 04:25* | *1* |
| *1,4-Difluorobenzene (Surr)* | *88* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 04:25* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 07/25/23 10:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.2 | U | 50.2 | | mg/Kg | | | 07/27/23 16:57 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.2 | U | 50.2 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 15:29 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.2 | U | 50.2 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 15:29 | 1 |
| OII Range Organics (Over C28-C36) | <50.2 | U | 50.2 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 15:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *198* | *S1+* | *70 - 130* | *07/24/23 11:35* | *07/27/23 15:29* | *1* |
| *o-Terphenyl (Surr)* | *231* | *S1+* | *70 - 130* | *07/24/23 11:35* | *07/27/23 15:29* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **997** | | 25.2 | | mg/Kg | | | 07/24/23 18:44 | 5 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## Client Sample ID: C-12, 0-4.1'

**Lab Sample ID: 880-31083-5**
**Matrix: Solid**
**Date Collected: 07/21/23 09:00**
**Date Received: 07/24/23 08:44**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U *+ | 0.00199 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:46 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:46 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:46 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:46 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:46 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 04:46 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *83* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 04:46* | *1* |
| *1,4-Difluorobenzene (Surr)* | *61* | *S1-* | *70 - 130* | *07/24/23 13:19* | *07/25/23 04:46* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 07/25/23 10:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.4 | U | 50.4 | | mg/Kg | | | 07/27/23 19:12 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.4 | U | 50.4 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 16:13 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.4 | U | 50.4 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 16:13 | 1 |
| OII Range Organics (Over C28-C36) | <50.4 | U | 50.4 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 16:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *97* | | *70 - 130* | *07/24/23 11:35* | *07/27/23 16:13* | *1* |
| *o-Terphenyl (Surr)* | *115* | | *70 - 130* | *07/24/23 11:35* | *07/27/23 16:13* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **118** | | 5.00 | | mg/Kg | | | 07/24/23 18:49 | 1 |

## Client Sample ID: C-8, 4.1'

**Lab Sample ID: 880-31083-6**
**Matrix: Solid**
**Date Collected: 07/21/23 08:10**
**Date Received: 07/24/23 08:44**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U *+ | 0.00198 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:06 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:06 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:06 | 1 |
| m,p-Xylenes | <0.00396 | U | 0.00396 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:06 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:06 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *92* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 05:06* | *1* |
| *1,4-Difluorobenzene (Surr)* | *51* | *S1-* | *70 - 130* | *07/24/23 13:19* | *07/25/23 05:06* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## Client Sample ID: C-8, 4.1'

**Lab Sample ID: 880-31083-6**
**Matrix: Solid**
**Date Collected: 07/21/23 08:10**
**Date Received: 07/24/23 08:44**

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 07/25/23 10:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 07/27/23 19:12 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 16:34 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 16:34 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 16:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *92* | | *70 - 130* | *07/24/23 11:35* | *07/27/23 16:34* | *1* |
| *o-Terphenyl (Surr)* | *114* | | *70 - 130* | *07/24/23 11:35* | *07/27/23 16:34* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **576** | | 5.00 | | mg/Kg | | | 07/24/23 18:54 | 1 |

## Client Sample ID: C-11, 0-4.1'

**Lab Sample ID: 880-31083-7**
**Matrix: Solid**
**Date Collected: 07/21/23 09:30**
**Date Received: 07/24/23 08:44**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U *+ | 0.00200 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:26 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:26 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:26 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:26 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:26 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *93* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 05:26* | *1* |
| *1,4-Difluorobenzene (Surr)* | *82* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 05:26* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00400 | U | 0.00400 | | mg/Kg | | | 07/25/23 10:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.3 | U | 50.3 | | mg/Kg | | | 07/27/23 19:12 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.3 | U | 50.3 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 16:56 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 50.3 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 16:56 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## Client Sample ID: C-11, 0-4.1'

**Date Collected: 07/21/23 09:30**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-7**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| OII Range Organics (Over C28-C36) | <50.3 | U | 50.3 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 16:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *93* | | *70 - 130* | *07/24/23 11:35* | *07/27/23 16:56* | *1* |
| *o-Terphenyl (Surr)* | *112* | | *70 - 130* | *07/24/23 11:35* | *07/27/23 16:56* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **130** | | 4.99 | | mg/Kg | | | 07/24/23 18:59 | 1 |

## Client Sample ID: C-10, 0-4.1'

**Date Collected: 07/21/23 10:00**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-8**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U *+ | 0.00202 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:47 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:47 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:47 | 1 |
| m,p-Xylenes | <0.00403 | U | 0.00403 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:47 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:47 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 07/24/23 13:19 | 07/25/23 05:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *74* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 05:47* | *1* |
| *1,4-Difluorobenzene (Surr)* | *74* | | *70 - 130* | *07/24/23 13:19* | *07/25/23 05:47* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 07/25/23 10:04 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.5 | U | 50.5 | | mg/Kg | | | 07/27/23 19:12 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.5 | U | 50.5 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 17:18 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.5 | U | 50.5 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 17:18 | 1 |
| OII Range Organics (Over C28-C36) | <50.5 | U | 50.5 | | mg/Kg | | 07/24/23 11:35 | 07/27/23 17:18 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *102* | | *70 - 130* | *07/24/23 11:35* | *07/27/23 17:18* | *1* |
| *o-Terphenyl (Surr)* | *131* | *S1+* | *70 - 130* | *07/24/23 11:35* | *07/27/23 17:18* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **535** | | 25.1 | | mg/Kg | | | 07/24/23 19:05 | 5 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## 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) |
| 880-31083-1 | C-1, 4.1' | 75 | 73 |
| 880-31083-2 | C-3, 4.1' | 83 | 70 |
| 880-31083-3 | C-4, 4.1' | 100 | 97 |
| 880-31083-4 | C-7, 4.1' | 96 | 88 |
| 880-31083-5 | C-12, 0-4.1' | 83 | 61 S1- |
| 880-31083-6 | C-8, 4.1' | 92 | 51 S1- |
| 880-31083-7 | C-11, 0-4.1' | 93 | 82 |
| 880-31083-8 | C-10, 0-4.1' | 74 | 74 |
| LCS 880-58376/1-A | Lab Control Sample | 102 | 113 |
| LCSD 880-58376/2-A | Lab Control Sample Dup | 101 | 108 |
| MB 880-58296/5-A | Method Blank | 70 | 80 |
| MB 880-58376/5-A | Method Blank | 70 | 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) |
| 880-31083-1 | C-1, 4.1' | 85 | 101 |
| 880-31083-2 | C-3, 4.1' | 91 | 111 |
| 880-31083-3 | C-4, 4.1' | 99 | 117 |
| 880-31083-4 | C-7, 4.1' | 198 S1+ | 231 S1+ |
| 880-31083-5 | C-12, 0-4.1' | 97 | 115 |
| 880-31083-6 | C-8, 4.1' | 92 | 114 |
| 880-31083-7 | C-11, 0-4.1' | 93 | 112 |
| 880-31083-8 | C-10, 0-4.1' | 102 | 131 S1+ |
| LCS 880-58344/2-A | Lab Control Sample | 96 | 123 |
| LCSD 880-58344/3-A | Lab Control Sample Dup | 92 | 112 |
| MB 880-58344/1-A | Method Blank | 146 S1+ | 183 S1+ |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

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

**Lab Sample ID: MB 880-58296/5-A**
**Matrix: Solid**
**Analysis Batch: 58304**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 58296**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/24/23 08:43 | 07/24/23 11:40 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/24/23 08:43 | 07/24/23 11:40 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/24/23 08:43 | 07/24/23 11:40 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 07/24/23 08:43 | 07/24/23 11:40 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/24/23 08:43 | 07/24/23 11:40 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 07/24/23 08:43 | 07/24/23 11:40 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *70* | | *70 - 130* | *07/24/23 08:43* | *07/24/23 11:40* | *1* |
| *1,4-Difluorobenzene (Surr)* | *80* | | *70 - 130* | *07/24/23 08:43* | *07/24/23 11:40* | *1* |

**Lab Sample ID: MB 880-58376/5-A**
**Matrix: Solid**
**Analysis Batch: 58304**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 58376**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/24/23 13:19 | 07/24/23 22:16 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/24/23 13:19 | 07/24/23 22:16 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/24/23 13:19 | 07/24/23 22:16 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 07/24/23 13:19 | 07/24/23 22:16 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/24/23 13:19 | 07/24/23 22:16 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 07/24/23 13:19 | 07/24/23 22:16 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *70* | | *70 - 130* | *07/24/23 13:19* | *07/24/23 22:16* | *1* |
| *1,4-Difluorobenzene (Surr)* | *92* | | *70 - 130* | *07/24/23 13:19* | *07/24/23 22:16* | *1* |

**Lab Sample ID: LCS 880-58376/1-A**
**Matrix: Solid**
**Analysis Batch: 58304**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 58376**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1314 | *+ | mg/Kg | | 131 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1138 | | mg/Kg | | 114 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1065 | | mg/Kg | | 107 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.2233 | | mg/Kg | | 112 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1222 | | mg/Kg | | 122 | 70 - 130 | | |

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

**Lab Sample ID: LCSD 880-58376/2-A**
**Matrix: Solid**
**Analysis Batch: 58304**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 58376**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1167 | | mg/Kg | | 117 | 70 - 130 | 12 | 35 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

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

**Lab Sample ID: LCSD 880-58376/2-A**
**Matrix: Solid**
**Analysis Batch: 58304**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 58376**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | | | 0.100 | 0.09938 | | mg/Kg | | 99 | 70 - 130 | 14 | 35 |
| Ethylbenzene | | | 0.100 | 0.09923 | | mg/Kg | | 99 | 70 - 130 | 7 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2060 | | mg/Kg | | 103 | 70 - 130 | 8 | 35 |
| o-Xylene | | | 0.100 | 0.1043 | | mg/Kg | | 104 | 70 - 130 | 16 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *108* | | *70 - 130* |

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

**Lab Sample ID: MB 880-58344/1-A**
**Matrix: Solid**
**Analysis Batch: 58605**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 58344**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 07/24/23 10:38 | 07/27/23 08:53 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 07/24/23 10:38 | 07/27/23 08:53 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 07/24/23 10:38 | 07/27/23 08:53 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *146* | *S1+* | *70 - 130* | *07/24/23 10:38* | *07/27/23 08:53* | *1* |
| *o-Terphenyl (Surr)* | *183* | *S1+* | *70 - 130* | *07/24/23 10:38* | *07/27/23 08:53* | *1* |

**Lab Sample ID: LCS 880-58344/2-A**
**Matrix: Solid**
**Analysis Batch: 58605**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 58344**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 864.9 | | mg/Kg | | 86 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 948.4 | | mg/Kg | | 95 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *96* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *123* | | *70 - 130* |

**Lab Sample ID: LCSD 880-58344/3-A**
**Matrix: Solid**
**Analysis Batch: 58605**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 58344**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 811.0 | | mg/Kg | | 81 | 70 - 130 | 6 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 885.4 | | mg/Kg | | 89 | 70 - 130 | 7 | 20 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

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

**Lab Sample ID: LCSD 880-58344/3-A**
**Matrix: Solid**
**Analysis Batch: 58605**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 58344**

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 92 | | 70 - 130 |
| o-Terphenyl (Surr) | 112 | | 70 - 130 |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-58338/1-A**
**Matrix: Solid**
**Analysis Batch: 58385**

**Client Sample ID: Method Blank**
**Prep Type: Soluble**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 07/24/23 16:36 | 1 |

**Lab Sample ID: LCS 880-58338/2-A**
**Matrix: Solid**
**Analysis Batch: 58385**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 233.4 | | mg/Kg | | 93 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-58338/3-A**
**Matrix: Solid**
**Analysis Batch: 58385**

**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 | 234.6 | | mg/Kg | | 94 | 90 - 110 | 1 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## GC VOA

### Prep Batch: 58296

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-58296/5-A | Method Blank | Total/NA | Solid | 5035 | |

### Analysis Batch: 58304

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31083-1 | C-1, 4.1' | Total/NA | Solid | 8021B | 58376 |
| 880-31083-2 | C-3, 4.1' | Total/NA | Solid | 8021B | 58376 |
| 880-31083-3 | C-4, 4.1' | Total/NA | Solid | 8021B | 58376 |
| 880-31083-4 | C-7, 4.1' | Total/NA | Solid | 8021B | 58376 |
| 880-31083-5 | C-12, 0-4.1' | Total/NA | Solid | 8021B | 58376 |
| 880-31083-6 | C-8, 4.1' | Total/NA | Solid | 8021B | 58376 |
| 880-31083-7 | C-11, 0-4.1' | Total/NA | Solid | 8021B | 58376 |
| 880-31083-8 | C-10, 0-4.1' | Total/NA | Solid | 8021B | 58376 |
| MB 880-58296/5-A | Method Blank | Total/NA | Solid | 8021B | 58296 |
| MB 880-58376/5-A | Method Blank | Total/NA | Solid | 8021B | 58376 |
| LCS 880-58376/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 58376 |
| LCSD 880-58376/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 58376 |

### Prep Batch: 58376

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31083-1 | C-1, 4.1' | Total/NA | Solid | 5035 | |
| 880-31083-2 | C-3, 4.1' | Total/NA | Solid | 5035 | |
| 880-31083-3 | C-4, 4.1' | Total/NA | Solid | 5035 | |
| 880-31083-4 | C-7, 4.1' | Total/NA | Solid | 5035 | |
| 880-31083-5 | C-12, 0-4.1' | Total/NA | Solid | 5035 | |
| 880-31083-6 | C-8, 4.1' | Total/NA | Solid | 5035 | |
| 880-31083-7 | C-11, 0-4.1' | Total/NA | Solid | 5035 | |
| 880-31083-8 | C-10, 0-4.1' | Total/NA | Solid | 5035 | |
| MB 880-58376/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-58376/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-58376/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |

### Analysis Batch: 58459

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31083-1 | C-1, 4.1' | Total/NA | Solid | Total BTEX | |
| 880-31083-2 | C-3, 4.1' | Total/NA | Solid | Total BTEX | |
| 880-31083-3 | C-4, 4.1' | Total/NA | Solid | Total BTEX | |
| 880-31083-4 | C-7, 4.1' | Total/NA | Solid | Total BTEX | |
| 880-31083-5 | C-12, 0-4.1' | Total/NA | Solid | Total BTEX | |
| 880-31083-6 | C-8, 4.1' | Total/NA | Solid | Total BTEX | |
| 880-31083-7 | C-11, 0-4.1' | Total/NA | Solid | Total BTEX | |
| 880-31083-8 | C-10, 0-4.1' | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Prep Batch: 58344

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31083-1 | C-1, 4.1' | Total/NA | Solid | 8015NM Prep | |
| 880-31083-2 | C-3, 4.1' | Total/NA | Solid | 8015NM Prep | |
| 880-31083-3 | C-4, 4.1' | Total/NA | Solid | 8015NM Prep | |
| 880-31083-4 | C-7, 4.1' | Total/NA | Solid | 8015NM Prep | |
| 880-31083-5 | C-12, 0-4.1' | Total/NA | Solid | 8015NM Prep | |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## GC Semi VOA (Continued)

### Prep Batch: 58344 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31083-6 | C-8, 4.1' | Total/NA | Solid | 8015NM Prep | |
| 880-31083-7 | C-11, 0-4.1' | Total/NA | Solid | 8015NM Prep | |
| 880-31083-8 | C-10, 0-4.1' | Total/NA | Solid | 8015NM Prep | |
| MB 880-58344/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-58344/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-58344/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 58605

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31083-1 | C-1, 4.1' | Total/NA | Solid | 8015B NM | 58344 |
| 880-31083-2 | C-3, 4.1' | Total/NA | Solid | 8015B NM | 58344 |
| 880-31083-3 | C-4, 4.1' | Total/NA | Solid | 8015B NM | 58344 |
| 880-31083-4 | C-7, 4.1' | Total/NA | Solid | 8015B NM | 58344 |
| 880-31083-5 | C-12, 0-4.1' | Total/NA | Solid | 8015B NM | 58344 |
| 880-31083-6 | C-8, 4.1' | Total/NA | Solid | 8015B NM | 58344 |
| 880-31083-7 | C-11, 0-4.1' | Total/NA | Solid | 8015B NM | 58344 |
| 880-31083-8 | C-10, 0-4.1' | Total/NA | Solid | 8015B NM | 58344 |
| MB 880-58344/1-A | Method Blank | Total/NA | Solid | 8015B NM | 58344 |
| LCS 880-58344/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 58344 |
| LCSD 880-58344/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 58344 |

### Analysis Batch: 58676

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31083-1 | C-1, 4.1' | Total/NA | Solid | 8015 NM | |
| 880-31083-2 | C-3, 4.1' | Total/NA | Solid | 8015 NM | |
| 880-31083-3 | C-4, 4.1' | Total/NA | Solid | 8015 NM | |
| 880-31083-4 | C-7, 4.1' | Total/NA | Solid | 8015 NM | |
| 880-31083-5 | C-12, 0-4.1' | Total/NA | Solid | 8015 NM | |
| 880-31083-6 | C-8, 4.1' | Total/NA | Solid | 8015 NM | |
| 880-31083-7 | C-11, 0-4.1' | Total/NA | Solid | 8015 NM | |
| 880-31083-8 | C-10, 0-4.1' | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 58338

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31083-1 | C-1, 4.1' | Soluble | Solid | DI Leach | |
| 880-31083-2 | C-3, 4.1' | Soluble | Solid | DI Leach | |
| 880-31083-3 | C-4, 4.1' | Soluble | Solid | DI Leach | |
| 880-31083-4 | C-7, 4.1' | Soluble | Solid | DI Leach | |
| 880-31083-5 | C-12, 0-4.1' | Soluble | Solid | DI Leach | |
| 880-31083-6 | C-8, 4.1' | Soluble | Solid | DI Leach | |
| 880-31083-7 | C-11, 0-4.1' | Soluble | Solid | DI Leach | |
| 880-31083-8 | C-10, 0-4.1' | Soluble | Solid | DI Leach | |
| MB 880-58338/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-58338/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-58338/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |

### Analysis Batch: 58385

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31083-1 | C-1, 4.1' | Soluble | Solid | 300.0 | 58338 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## HPLC/IC (Continued)

### Analysis Batch: 58385 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31083-2 | C-3, 4.1' | Soluble | Solid | 300.0 | 58338 |
| 880-31083-3 | C-4, 4.1' | Soluble | Solid | 300.0 | 58338 |
| 880-31083-4 | C-7, 4.1' | Soluble | Solid | 300.0 | 58338 |
| 880-31083-5 | C-12, 0-4.1' | Soluble | Solid | 300.0 | 58338 |
| 880-31083-6 | C-8, 4.1' | Soluble | Solid | 300.0 | 58338 |
| 880-31083-7 | C-11, 0-4.1' | Soluble | Solid | 300.0 | 58338 |
| 880-31083-8 | C-10, 0-4.1' | Soluble | Solid | 300.0 | 58338 |
| MB 880-58338/1-A | Method Blank | Soluble | Solid | 300.0 | 58338 |
| LCS 880-58338/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 58338 |
| LCSD 880-58338/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 58338 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## Client Sample ID: C-1, 4.1'

**Date Collected: 07/20/23 10:00**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-1**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 58376 | 07/24/23 13:19 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 58304 | 07/25/23 03:24 | SM | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 58459 | 07/25/23 10:04 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 58676 | 07/27/23 16:57 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.99 g | 10 mL | 58344 | 07/24/23 10:38 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 58605 | 07/27/23 14:23 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 58338 | 07/24/23 10:00 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 58385 | 07/24/23 18:18 | CH | EET MID |

## Client Sample ID: C-3, 4.1'

**Date Collected: 07/20/23 10:10**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-2**
**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 | | | 5.05 g | 5 mL | 58376 | 07/24/23 13:19 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 58304 | 07/25/23 03:44 | SM | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 58459 | 07/25/23 10:04 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 58676 | 07/27/23 16:57 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 58344 | 07/24/23 10:38 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 58605 | 07/27/23 14:45 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 58338 | 07/24/23 10:00 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 58385 | 07/24/23 18:24 | CH | EET MID |

## Client Sample ID: C-4, 4.1'

**Date Collected: 07/20/23 10:20**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-3**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.97 g | 5 mL | 58376 | 07/24/23 13:19 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 58304 | 07/25/23 04:05 | SM | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 58459 | 07/25/23 10:04 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 58676 | 07/27/23 16:57 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.06 g | 10 mL | 58344 | 07/24/23 11:35 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 58605 | 07/27/23 15:07 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 58338 | 07/24/23 10:00 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 58385 | 07/24/23 18:39 | CH | EET MID |

## Client Sample ID: C-7, 4.1'

**Date Collected: 07/21/23 08:00**
**Date Received: 07/24/23 08:44**

**Lab Sample ID: 880-31083-4**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 58376 | 07/24/23 13:19 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 58304 | 07/25/23 04:25 | SM | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 58459 | 07/25/23 10:04 | SM | EET MID |

Eurofins Midland

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## Client Sample ID: C-7, 4.1'

**Lab Sample ID: 880-31083-4**
**Matrix: Solid**
**Date Collected: 07/21/23 08:00**
**Date Received: 07/24/23 08:44**

| 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 | | | 58676 | 07/27/23 16:57 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.97 g | 10 mL | 58344 | 07/24/23 11:35 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 58605 | 07/27/23 15:29 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 58338 | 07/24/23 10:00 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 58385 | 07/24/23 18:44 | CH | EET MID |

## Client Sample ID: C-12, 0-4.1'

**Lab Sample ID: 880-31083-5**
**Matrix: Solid**
**Date Collected: 07/21/23 09:00**
**Date Received: 07/24/23 08:44**

| 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 | 58376 | 07/24/23 13:19 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 58304 | 07/25/23 04:46 | SM | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 58459 | 07/25/23 10:04 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 58676 | 07/27/23 19:12 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.93 g | 10 mL | 58344 | 07/24/23 11:35 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 58605 | 07/27/23 16:13 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 58338 | 07/24/23 10:00 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 58385 | 07/24/23 18:49 | CH | EET MID |

## Client Sample ID: C-8, 4.1'

**Lab Sample ID: 880-31083-6**
**Matrix: Solid**
**Date Collected: 07/21/23 08:10**
**Date Received: 07/24/23 08:44**

| 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 | 58376 | 07/24/23 13:19 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 58304 | 07/25/23 05:06 | SM | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 58459 | 07/25/23 10:04 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 58676 | 07/27/23 19:12 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 58344 | 07/24/23 11:35 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 58605 | 07/27/23 16:34 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 58338 | 07/24/23 10:00 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 58385 | 07/24/23 18:54 | CH | EET MID |

## Client Sample ID: C-11, 0-4.1'

**Lab Sample ID: 880-31083-7**
**Matrix: Solid**
**Date Collected: 07/21/23 09:30**
**Date Received: 07/24/23 08:44**

| 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 | 58376 | 07/24/23 13:19 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 58304 | 07/25/23 05:26 | SM | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 58459 | 07/25/23 10:04 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 58676 | 07/27/23 19:12 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.94 g | 10 mL | 58344 | 07/24/23 11:35 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 58605 | 07/27/23 16:56 | AJ | EET MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

## Client Sample ID: C-11, 0-4.1'

**Lab Sample ID: 880-31083-7**
**Matrix: Solid**
**Date Collected: 07/21/23 09:30**
**Date Received: 07/24/23 08:44**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 58338 | 07/24/23 10:00 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 58385 | 07/24/23 18:59 | CH | EET MID |

## Client Sample ID: C-10, 0-4.1'

**Lab Sample ID: 880-31083-8**
**Matrix: Solid**
**Date Collected: 07/21/23 10:00**
**Date Received: 07/24/23 08:44**

| 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 | 58376 | 07/24/23 13:19 | AJ | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 58304 | 07/25/23 05:47 | SM | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 58459 | 07/25/23 10:04 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 58676 | 07/27/23 19:12 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.91 g | 10 mL | 58344 | 07/24/23 11:35 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 58605 | 07/27/23 17:18 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 4.99 g | 50 mL | 58338 | 07/24/23 10:00 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 5 | | | 58385 | 07/24/23 19:05 | CH | EET MID |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-31083-1
Project/Site: Salado Draw 19 CTB SDG: 22-0105-04

## 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 | T104704400-23-26 | 06-30-24 |

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: 880-31083-1
Project/Site: Salado Draw 19 CTB SDG: 22-0105-04

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

**Protocol References:**

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Salado Draw 19 CTB

Job ID: 880-31083-1
SDG: 22-0105-04

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-31083-1 | C-1, 4.1' | Solid | 07/20/23 10:00 | 07/24/23 08:44 |
| 880-31083-2 | C-3, 4.1' | Solid | 07/20/23 10:10 | 07/24/23 08:44 |
| 880-31083-3 | C-4, 4.1' | Solid | 07/20/23 10:20 | 07/24/23 08:44 |
| 880-31083-4 | C-7, 4.1' | Solid | 07/21/23 08:00 | 07/24/23 08:44 |
| 880-31083-5 | C-12, 0-4.1' | Solid | 07/21/23 09:00 | 07/24/23 08:44 |
| 880-31083-6 | C-8, 4.1' | Solid | 07/21/23 08:10 | 07/24/23 08:44 |
| 880-31083-7 | C-11, 0-4.1' | Solid | 07/21/23 09:30 | 07/24/23 08:44 |
| 880-31083-8 | C-10, 0-4.1' | Solid | 07/21/23 10:00 | 07/24/23 08:44 |

Released to Imaging: 12/5/2023 1:12:27 PM
Received by OCD: 8/23/2023 10:40:52 AM

31083 No. 3095

# CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to

DATE 7/24/23 PAGE 1 OF 1
PO# LAB WORK ORDER#
PROJECT LOCATION OR NAME Salado Draw 19 CTB
LAI PROJECT # 22-0105-04 COLLECTOR KB

TRRP report? ☐ Yes ☒ No

TIME ZONE
Time zone/State MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

| Field Sample I D | Lab # | Date | Time | Matrix | # of Containers | PRESERVATION: HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | ANALYSES: BTEX ☒ MTBE ☐ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ | TCLP VOC ☐ | TCLP - PEST ☐ | HERB ☐ | Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ | OTHER LIST ☐ | LEAD - TOTAL ☐ | D W 200.8 ☐ | TCLP ☐ | RCI ☐ | TOX ☐ | TDS ☐ | TSS ☐ | FLASHPOINT ☐ | pH ☐ | % MOISTURE ☐ | EXPLOSIVES ☐ | CYANIDE ☐ | HEXAVALENT CHROMIUM ☐ | CHLORIDES ☒ | PECHLORATE ☐ | ANIONS ☐ | ALKALINITY ☐ | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C-1, 4.1' | | 7/20/23 | 1000 | S | 4 | | | | X | X | X | | | X | X | X | | | | | | | | | | | | | | | | | | | | | | | X | | | | 202 |
| C-3, 4.1' | | | 1010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C-4, 4.1' | | | 1020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C-7, 4.1' | | 7/21/23 | 0800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C-12, 0-4.1' | | | 0900 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C-8, 4.1' | | | 0810 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C-11, 0-4.1' | | | 0930 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C-10, 0-4.1' | | | 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

880-31083 Chain of Custody

TOTAL

| | | |
|---|---|---|
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
| [signature] | 7/24/23 0844 | [signature] |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |

LABORATORY XenCO

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

LABORATORY USE ONLY:
RECEIVING TEMP -2.9/-3.2 THERM# JKE
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL #
☒ HAND DELIVERED

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-31083-1
SDG Number: 22-0105-04

**Login Number: 31083**
**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 | |

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 8/1/2023 10:29:37 AM

## JOB DESCRIPTION

SD 19 CTB Manifold
SDG NUMBER 22-0105-04

## JOB NUMBER

880-31221-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.



Released to Imaging: 12/5/2023 1:12:27 PM

my EOL

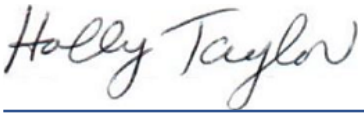
# Eurofins Midland

## Job Notes

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

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

## Authorization



Generated
8/1/2023 10:29:37 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Laboratory Job ID: 880-31221-1
SDG: 22-0105-04

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# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-31221-1
Project/Site: SD 19 CTB Manifold SDG: 22-0105-04

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-31221-1
SDG: 22-0105-04

## Job ID: 880-31221-1

**Laboratory: Eurofins Midland**

**Narrative**

**Job Narrative**
**880-31221-1**

**Receipt**
The sample was received on 7/26/2023 9:27 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.6º C.

**Receipt Exceptions**
The following sample was received and analyzed from an unpreserved bulk soil jar: BF-1 (880-31221-1).

**GC VOA**
No analytical or quality issues were noted, other than those described 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**
Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-58546 and analytical batch 880-58570 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.



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# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-31221-1
SDG: 22-0105-04

## Client Sample ID: BF-1

**Date Collected: 07/25/23 12:04**
**Date Received: 07/26/23 09:27**

## Lab Sample ID: 880-31221-1

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 12:06 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 12:06 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 12:06 | 1 |
| m,p-Xylenes | <0.00403 | U | 0.00403 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 12:06 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 12:06 | 1 |
| Xylenes, Total | <0.00403 | U | 0.00403 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 12:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | *07/26/23 09:29* | *07/26/23 12:06* | *1* |
| *1,4-Difluorobenzene (Surr)* | *100* | | *70 - 130* | *07/26/23 09:29* | *07/26/23 12:06* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00403 | U | 0.00403 | | mg/Kg | | | 07/27/23 07:33 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.3 | U | 50.3 | | mg/Kg | | | 08/01/23 10:34 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.3 | U | 50.3 | | mg/Kg | | 07/26/23 16:08 | 07/31/23 11:03 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 50.3 | | mg/Kg | | 07/26/23 16:08 | 07/31/23 11:03 | 1 |
| OII Range Organics (Over C28-C36) | <50.3 | U | 50.3 | | mg/Kg | | 07/26/23 16:08 | 07/31/23 11:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *129* | | *70 - 130* | *07/26/23 16:08* | *07/31/23 11:03* | *1* |
| *o-Terphenyl (Surr)* | *109* | | *70 - 130* | *07/26/23 16:08* | *07/31/23 11:03* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **79.0** | | 4.97 | | mg/Kg | | | 07/26/23 20:12 | 1 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-31221-1
SDG: 22-0105-04

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | BFB1 | DFBZ1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-31221-1 | BF-1 | 102 | 100 |
| 880-31221-1 MS | BF-1 | 109 | 102 |
| 880-31221-1 MSD | BF-1 | 110 | 100 |
| LCS 880-58524/1-A | Lab Control Sample | 107 | 101 |
| LCSD 880-58524/2-A | Lab Control Sample Dup | 122 | 96 |
| MB 880-58524/5-A | Method Blank | 99 | 89 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | 1CO1 | OTPH1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-31221-1 | BF-1 | 129 | 109 |
| 880-31221-1 MS | BF-1 | 112 | 90 |
| 880-31221-1 MSD | BF-1 | 106 | 84 |
| LCS 880-58586/2-A | Lab Control Sample | 93 | 97 |
| LCSD 880-58586/3-A | Lab Control Sample Dup | 92 | 94 |
| MB 880-58586/1-A | Method Blank | 145 S1+ | 133 S1+ |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-31221-1
SDG: 22-0105-04

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

**Lab Sample ID: MB 880-58524/5-A**
**Matrix: Solid**
**Analysis Batch: 58520**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 58524**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 11:44 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 11:44 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 11:44 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 11:44 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 11:44 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 07/26/23 09:29 | 07/26/23 11:44 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | *07/26/23 09:29* | *07/26/23 11:44* | *1* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* | *07/26/23 09:29* | *07/26/23 11:44* | *1* |

**Lab Sample ID: LCS 880-58524/1-A**
**Matrix: Solid**
**Analysis Batch: 58520**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 58524**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09277 | | mg/Kg | | 93 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.09626 | | mg/Kg | | 96 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.08762 | | mg/Kg | | 88 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.1674 | | mg/Kg | | 84 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.08390 | | mg/Kg | | 84 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *101* | | *70 - 130* |

**Lab Sample ID: LCSD 880-58524/2-A**
**Matrix: Solid**
**Analysis Batch: 58520**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 58524**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1036 | | mg/Kg | | 104 | 70 - 130 | 11 | 35 |
| Toluene | | | 0.100 | 0.1173 | | mg/Kg | | 117 | 70 - 130 | 20 | 35 |
| Ethylbenzene | | | 0.100 | 0.1118 | | mg/Kg | | 112 | 70 - 130 | 24 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2197 | | mg/Kg | | 110 | 70 - 130 | 27 | 35 |
| o-Xylene | | | 0.100 | 0.1100 | | mg/Kg | | 110 | 70 - 130 | 27 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *122* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *96* | | *70 - 130* |

**Lab Sample ID: 880-31221-1 MS**
**Matrix: Solid**
**Analysis Batch: 58520**

**Client Sample ID: BF-1**
**Prep Type: Total/NA**
**Prep Batch: 58524**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.0996 | 0.1008 | | mg/Kg | | 101 | 70 - 130 | | |
| Toluene | <0.00202 | U | 0.0996 | 0.1043 | | mg/Kg | | 105 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-31221-1
SDG: 22-0105-04

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

**Lab Sample ID: 880-31221-1 MS**
**Matrix: Solid**
**Analysis Batch: 58520**

**Client Sample ID: BF-1**
**Prep Type: Total/NA**
**Prep Batch: 58524**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | <0.00202 | U | 0.0996 | 0.09476 | | mg/Kg | | 95 | 70 - 130 |
| m,p-Xylenes | <0.00403 | U | 0.199 | 0.1797 | | mg/Kg | | 90 | 70 - 130 |
| o-Xylene | <0.00202 | U | 0.0996 | 0.08933 | | mg/Kg | | 90 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *102* | | *70 - 130* |

**Lab Sample ID: 880-31221-1 MSD**
**Matrix: Solid**
**Analysis Batch: 58520**

**Client Sample ID: BF-1**
**Prep Type: Total/NA**
**Prep Batch: 58524**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.0998 | 0.09942 | | mg/Kg | | 100 | 70 - 130 | 1 | 35 |
| Toluene | <0.00202 | U | 0.0998 | 0.1063 | | mg/Kg | | 107 | 70 - 130 | 2 | 35 |
| Ethylbenzene | <0.00202 | U | 0.0998 | 0.09813 | | mg/Kg | | 98 | 70 - 130 | 3 | 35 |
| m,p-Xylenes | <0.00403 | U | 0.200 | 0.1883 | | mg/Kg | | 94 | 70 - 130 | 5 | 35 |
| o-Xylene | <0.00202 | U | 0.0998 | 0.09388 | | mg/Kg | | 94 | 70 - 130 | 5 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *110* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *100* | | *70 - 130* |

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

**Lab Sample ID: MB 880-58586/1-A**
**Matrix: Solid**
**Analysis Batch: 58813**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 58586**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 07/26/23 16:08 | 07/31/23 08:28 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 07/26/23 16:08 | 07/31/23 08:28 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 07/26/23 16:08 | 07/31/23 08:28 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *145* | *S1+* | *70 - 130* | *07/26/23 16:08* | *07/31/23 08:28* | *1* |
| *o-Terphenyl (Surr)* | *133* | *S1+* | *70 - 130* | *07/26/23 16:08* | *07/31/23 08:28* | *1* |

**Lab Sample ID: LCS 880-58586/2-A**
**Matrix: Solid**
**Analysis Batch: 58813**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 58586**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 839.6 | | mg/Kg | | 84 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 824.9 | | mg/Kg | | 82 | 70 - 130 |

Eurofins Midland

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-31221-1
SDG: 22-0105-04

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

**Lab Sample ID: LCS 880-58586/2-A**
**Matrix: Solid**
**Analysis Batch: 58813**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 58586**

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *93* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *97* | | *70 - 130* |

**Lab Sample ID: LCSD 880-58586/3-A**
**Matrix: Solid**
**Analysis Batch: 58813**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 58586**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 840.7 | | mg/Kg | | 84 | 70 - 130 | 0 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 797.4 | | mg/Kg | | 80 | 70 - 130 | 3 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *92* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *94* | | *70 - 130* |

**Lab Sample ID: 880-31221-1 MS**
**Matrix: Solid**
**Analysis Batch: 58813**

**Client Sample ID: BF-1**
**Prep Type: Total/NA**
**Prep Batch: 58586**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.3 | U | 1010 | 768.4 | | mg/Kg | | 76 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 1010 | 1030 | | mg/Kg | | 102 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *112* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *90* | | *70 - 130* |

**Lab Sample ID: 880-31221-1 MSD**
**Matrix: Solid**
**Analysis Batch: 58813**

**Client Sample ID: BF-1**
**Prep Type: Total/NA**
**Prep Batch: 58586**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.3 | U | 1010 | 723.4 | | mg/Kg | | 72 | 70 - 130 | 6 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.3 | U | 1010 | 976.5 | | mg/Kg | | 97 | 70 - 130 | 5 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *106* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *84* | | *70 - 130* |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-31221-1
SDG: 22-0105-04

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-58546/1-A**
**Matrix: Solid**
**Analysis Batch: 58570**

**Client Sample ID: Method Blank**
**Prep Type: Soluble**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 07/26/23 18:05 | 1 |

**Lab Sample ID: LCS 880-58546/2-A**
**Matrix: Solid**
**Analysis Batch: 58570**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 253.7 | | mg/Kg | | 101 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-58546/3-A**
**Matrix: Solid**
**Analysis Batch: 58570**

**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 | 249.2 | | mg/Kg | | 100 | 90 - 110 | 2 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-31221-1
SDG: 22-0105-04

## GC VOA

### Analysis Batch: 58520

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31221-1 | BF-1 | Total/NA | Solid | 8021B | 58524 |
| MB 880-58524/5-A | Method Blank | Total/NA | Solid | 8021B | 58524 |
| LCS 880-58524/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 58524 |
| LCSD 880-58524/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 58524 |
| 880-31221-1 MS | BF-1 | Total/NA | Solid | 8021B | 58524 |
| 880-31221-1 MSD | BF-1 | Total/NA | Solid | 8021B | 58524 |

### Prep Batch: 58524

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31221-1 | BF-1 | Total/NA | Solid | 5035 | |
| MB 880-58524/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-58524/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-58524/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-31221-1 MS | BF-1 | Total/NA | Solid | 5035 | |
| 880-31221-1 MSD | BF-1 | Total/NA | Solid | 5035 | |

### Analysis Batch: 58607

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31221-1 | BF-1 | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Prep Batch: 58586

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31221-1 | BF-1 | Total/NA | Solid | 8015NM Prep | |
| MB 880-58586/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-58586/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-58586/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-31221-1 MS | BF-1 | Total/NA | Solid | 8015NM Prep | |
| 880-31221-1 MSD | BF-1 | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 58813

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31221-1 | BF-1 | Total/NA | Solid | 8015B NM | 58586 |
| MB 880-58586/1-A | Method Blank | Total/NA | Solid | 8015B NM | 58586 |
| LCS 880-58586/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 58586 |
| LCSD 880-58586/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 58586 |
| 880-31221-1 MS | BF-1 | Total/NA | Solid | 8015B NM | 58586 |
| 880-31221-1 MSD | BF-1 | Total/NA | Solid | 8015B NM | 58586 |

### Analysis Batch: 58991

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31221-1 | BF-1 | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 58546

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31221-1 | BF-1 | Soluble | Solid | DI Leach | |
| MB 880-58546/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-58546/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-58546/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-31221-1
SDG: 22-0105-04

## HPLC/IC

### Analysis Batch: 58570

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-31221-1 | BF-1 | Soluble | Solid | 300.0 | 58546 |
| MB 880-58546/1-A | Method Blank | Soluble | Solid | 300.0 | 58546 |
| LCS 880-58546/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 58546 |
| LCSD 880-58546/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 58546 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-31221-1
SDG: 22-0105-04

## Client Sample ID: BF-1

**Date Collected: 07/25/23 12:04**
**Date Received: 07/26/23 09:27**

## Lab Sample ID: 880-31221-1

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.96 g | 5 mL | 58524 | 07/26/23 09:29 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 58520 | 07/26/23 12:06 | SM | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 58607 | 07/27/23 07:33 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 58991 | 08/01/23 10:34 | AJ | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 9.94 g | 10 mL | 58586 | 07/26/23 16:08 | TKC | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 58813 | 07/31/23 11:03 | AJ | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 58546 | 07/26/23 09:50 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | | | 58570 | 07/26/23 20:12 | CH | EET MID |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-31221-1
Project/Site: SD 19 CTB Manifold SDG: 22-0105-04

## 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 | T104704400-23-26 | 06-30-24 |

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: 880-31221-1
Project/Site: SD 19 CTB Manifold SDG: 22-0105-04

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

**Protocol References:**

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Manifold

Job ID: 880-31221-1
SDG: 22-0105-04

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-31221-1 | BF-1 | Solid | 07/25/23 12:04 | 07/26/23 09:27 |

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31221

No. 2508

# CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N Marienfeld, Ste 202
Midland, TX 79701
432-687-0901

DATE: 7/26/2023 PAGE 1 OF 1

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: SD 19 CTB MANIFOLD

LAI PROJECT #: 22-0105-04 COLLECTOR: DSG

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MNT / NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

| Field Sample I D | Lab # | Date | Time | Matrix | # of Containers | PRESERVATION: HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | ANALYSES: BTEX ☒ MTBE ☐ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP VOC ☐ | TCLP - METALS (RCRA) ☐ | TCLP - PEST ☐ | HERB ☐ | Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ | OTHER LIST ☐ | LEAD - TOTAL ☐ | D W 200 8 ☐ | TCLP ☐ | RCI ☐ | TOX ☐ | FLASHPOINT ☐ | TDS ☐ | TSS ☐ | % MOISTURE ☐ | pH ☐ | CYANIDE ☐ | HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ | PECHLORATE ☐ | CHLORIDE ☒ | ANIONS ☐ | ALKALINITY ☐ | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BF-1 | | 7/25/23 | 1204 | S | 1 | | | | X | | | | | | X | X | X | | | | | | | | | | | | | | | | | | | | | | | | X | | | |

880-31221 Chain of Custody

TOTAL 1

| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
|---|---|---|
| Daniel Mannon | 7/26/23 957 | |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |

LABORATORY Xenco

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

**LABORATORY USE ONLY:**
RECEIVING TEMP 5.9/5.6 THERM#: IR8-38
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☒ HAND DELIVERED

8/7/2023
Page 18 of 19
Received by OCD: 8/23/2023 10:40:52 AM
Released to Imaging: 12/5/2023 1:12:27 PM

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-31221-1
SDG Number: 22-0105-04

**Login Number: 31221**
**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 | |

eurofins | Environment Testing America

# ANALYTICAL REPORT

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

Laboratory Job ID: 880-16241-1
Laboratory Sample Delivery Group: 22-0105-09
Client Project/Site: SD 19 CTB Produced Water Release

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

Attn: Mr. Mark J Larson

Holly Taylor

*Authorized for release by:*
*6/29/2022 8:37:38 AM*

Holly Taylor, Project Manager
(806)794-1296
Holly.Taylor@et.eurofinsus.com

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

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

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

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produced Water Release

Laboratory Job ID: 880-16241-1
SDG: 22-0105-09

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# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## Qualifiers

### GC VOA

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

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| *1 | LCS/LCSD RPD exceeds control limits. |
| S1+ | Surrogate recovery exceeds control limits, high biased. |
| U | Indicates the analyte was analyzed for but not detected. |

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## Job ID: 880-16241-1

### Laboratory: Eurofins Midland

**Narrative**

**Job Narrative**
**880-16241-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 6/23/2022 11:06 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 0.2º C.

**GC VOA**
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-28354 and analytical batch 880-28306 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

**GC Semi VOA**
Method 8015B NM: Surrogate recovery for the following sample was outside control limits: S-4 1' (880-16241-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015B NM: CCV biased low for gasoline range hydrocarbons, however an acceptable CCV was analyzed within the 12 hour window, therefore data was qualified and reported.
(CCV 880-28190/19)

Method 8015B NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-28233 and analytical batch 880-28190 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**
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: SD 19 CTB Produced Water Release

Job ID: 880-16241-1
SDG: 22-0105-09

## Client Sample ID: S-1 0.5'

**Date Collected: 06/22/22 11:12**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-1

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:41 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:41 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:41 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:41 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:41 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:41 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 21:41* | *1* |
| *1,4-Difluorobenzene (Surr)* | *94* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 21:41* | *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 | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 | <49.9 | U *1 | 49.9 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 02:32 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 02:32 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 02:32 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *111* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 02:32* | *1* |
| *o-Terphenyl (Surr)* | *115* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 02:32* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **69.2** | | 4.97 | | mg/Kg | | | 06/28/22 06:40 | 1 |

## Client Sample ID: S-1 1'

**Date Collected: 06/22/22 11:14**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-2

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:02 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:02 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:02 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:02 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:02 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 22:02* | *1* |
| *1,4-Difluorobenzene (Surr)* | *93* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 22:02* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## Client Sample ID: S-1 1'
**Date Collected: 06/22/22 11:14**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-2
**Matrix: Solid**

### 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 | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 | <50.0 | U *1 | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 02:53 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 02:53 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 02:53 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *115* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 02:53* | *1* |
| *o-Terphenyl (Surr)* | *123* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 02:53* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **58.8** | | 4.98 | | mg/Kg | | | 06/28/22 06:50 | 1 |

## Client Sample ID: S-2 0.5'
**Date Collected: 06/22/22 11:16**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-3
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U | 0.00198 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:22 | 1 |
| Toluene | <0.00198 | U | 0.00198 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:22 | 1 |
| Ethylbenzene | <0.00198 | U | 0.00198 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:22 | 1 |
| m,p-Xylenes | <0.00397 | U | 0.00397 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:22 | 1 |
| o-Xylene | <0.00198 | U | 0.00198 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:22 | 1 |
| Xylenes, Total | <0.00397 | U | 0.00397 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *117* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 22:22* | *1* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 22:22* | *1* |

### 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 | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 | <50.0 | U *1 | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 03:14 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 03:14 | 1 |

Eurofins Midland

# Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## Client Sample ID: S-2 0.5'
**Lab Sample ID: 880-16241-3**
**Date Collected: 06/22/22 11:16** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oll Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 03:14 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *115* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 03:14* | *1* |
| *o-Terphenyl (Surr)* | *121* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 03:14* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **95.2** | | 4.99 | | mg/Kg | | | 06/28/22 06:59 | 1 |

## Client Sample ID: S-2 1'
**Lab Sample ID: 880-16241-4**
**Date Collected: 06/22/22 11:18** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:43 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:43 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:43 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:43 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:43 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 22:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *116* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 22:43* | *1* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 22:43* | *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 | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 | <49.9 | U *1 | 49.9 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 03:35 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 03:35 | 1 |
| Oll Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 03:35 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *110* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 03:35* | *1* |
| *o-Terphenyl (Surr)* | *115* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 03:35* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **58.1** | | 4.98 | | mg/Kg | | | 06/28/22 07:26 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produced Water Release

Job ID: 880-16241-1
SDG: 22-0105-09

## Client Sample ID: S-3 0.5'

**Date Collected: 06/22/22 11:20**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-5

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:03 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:03 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:03 | 1 |
| m,p-Xylenes | <0.00401 | U | 0.00401 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:03 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:03 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 23:03* | *1* |
| *1,4-Difluorobenzene (Surr)* | *88* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 23:03* | *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 | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 *1 | 49.8 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 03:56 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 03:56 | 1 |
| Oil Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 03:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *109* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 03:56* | *1* |
| *o-Terphenyl (Surr)* | *112* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 03:56* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **31.6** | | 5.04 | | mg/Kg | | | 06/28/22 07:36 | 1 |

## Client Sample ID: S-3 1'

**Date Collected: 06/22/22 11:22**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-6

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:23 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:23 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:23 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:23 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:23 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *119* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 23:23* | *1* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 23:23* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## Client Sample ID: S-3 1'
**Lab Sample ID: 880-16241-6**
**Date Collected: 06/22/22 11:22** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

### 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 | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 | <50.0 | U *1 | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 04:17 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 04:17 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 04:17 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *105* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 04:17* | *1* |
| *o-Terphenyl (Surr)* | *108* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 04:17* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 27.1 | | 5.04 | | mg/Kg | | | 06/28/22 08:03 | 1 |

## Client Sample ID: S-4 0.5'
**Lab Sample ID: 880-16241-7**
**Date Collected: 06/22/22 11:24** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:44 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:44 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:44 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:44 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:44 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 23:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *117* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 23:44* | *1* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 23:44* | *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 | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 | <49.9 | U *1 | 49.9 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 04:38 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 04:38 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## Client Sample ID: S-4 0.5' Lab Sample ID: 880-16241-7
**Date Collected: 06/22/22 11:24** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oll Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 04:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *119* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 04:38* | *1* |
| *o-Terphenyl (Surr)* | *122* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 04:38* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **919** | | 24.9 | | mg/Kg | | | 06/28/22 08:13 | 5 |

## Client Sample ID: S-4 1' Lab Sample ID: 880-16241-8
**Date Collected: 06/22/22 11:26** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:04 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:04 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:04 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:04 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:04 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *116* | | *70 - 130* | *06/24/22 15:16* | *06/26/22 00:04* | *1* |
| *1,4-Difluorobenzene (Surr)* | *88* | | *70 - 130* | *06/24/22 15:16* | *06/26/22 00:04* | *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 | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 | <50.0 | U *1 | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 04:59 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 04:59 | 1 |
| Oll Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 04:59 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *126* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 04:59* | *1* |
| *o-Terphenyl (Surr)* | *134* | *S1+* | *70 - 130* | *06/23/22 13:00* | *06/24/22 04:59* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **199** | | 25.3 | | mg/Kg | | | 06/28/22 08:22 | 5 |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produced Water Release

Job ID: 880-16241-1
SDG: 22-0105-09

## Client Sample ID: S-5 0.5'

**Date Collected: 06/22/22 10:55**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-9

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:25 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:25 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:25 | 1 |
| m,p-Xylenes | <0.00404 | U | 0.00404 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:25 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:25 | 1 |
| Xylenes, Total | <0.00404 | U | 0.00404 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:25 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *118* | | *70 - 130* | *06/24/22 15:16* | *06/26/22 00:25* | *1* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* | *06/24/22 15:16* | *06/26/22 00:25* | *1* |

### Method: Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | | mg/Kg | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 *1 | 49.8 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 05:20 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 05:20 | 1 |
| Oil Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 06/23/22 13:00 | 06/24/22 05:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *103* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 05:20* | *1* |
| *o-Terphenyl (Surr)* | *108* | | *70 - 130* | *06/23/22 13:00* | *06/24/22 05:20* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **0.114** | | 0.00502 | | mg/Kg | | | 06/28/22 08:31 | 1 |

## Client Sample ID: S-6 0.5'

**Date Collected: 06/22/22 11:00**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-10

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:45 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:45 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:45 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:45 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:45 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 06/24/22 15:16 | 06/26/22 00:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *116* | | *70 - 130* | *06/24/22 15:16* | *06/26/22 00:45* | *1* |
| *1,4-Difluorobenzene (Surr)* | *87* | | *70 - 130* | *06/24/22 15:16* | *06/26/22 00:45* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## Client Sample ID: S-6 0.5'
**Lab Sample ID: 880-16241-10**
**Date Collected: 06/22/22 11:00** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

### 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 | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 16:11 | 06/24/22 02:28 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 16:11 | 06/24/22 02:28 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 16:11 | 06/24/22 02:28 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *113* | | *70 - 130* | *06/23/22 16:11* | *06/24/22 02:28* | *1* |
| *o-Terphenyl (Surr)* | *121* | | *70 - 130* | *06/23/22 16:11* | *06/24/22 02:28* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **30.0** | | 5.03 | | mg/Kg | | | 06/28/22 08:40 | 1 |

## Client Sample ID: S-7 0.5'
**Lab Sample ID: 880-16241-11**
**Date Collected: 06/22/22 11:05** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:02 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:02 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:02 | 1 |
| m,p-Xylenes | <0.00401 | U | 0.00401 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:02 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:02 | 1 |
| Xylenes, Total | <0.00401 | U | 0.00401 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *113* | | *70 - 130* | *06/24/22 14:13* | *06/25/22 14:02* | *1* |
| *1,4-Difluorobenzene (Surr)* | *97* | | *70 - 130* | *06/24/22 14:13* | *06/25/22 14:02* | *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 | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 | | 06/23/22 16:11 | 06/24/22 02:48 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.8 | U | 49.8 | | mg/Kg | | 06/23/22 16:11 | 06/24/22 02:48 | 1 |

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# Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## Client Sample ID: S-7 0.5'
**Lab Sample ID: 880-16241-11**
**Date Collected: 06/22/22 11:05** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oll Range Organics (Over C28-C36) | <49.8 | U | 49.8 | | mg/Kg | | 06/23/22 16:11 | 06/24/22 02:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *123* | | *70 - 130* | *06/23/22 16:11* | *06/24/22 02:48* | *1* |
| *o-Terphenyl (Surr)* | *134* | *S1+* | *70 - 130* | *06/23/22 16:11* | *06/24/22 02:48* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **218** | | 25.0 | | mg/Kg | | | 06/28/22 08:49 | 5 |

## Client Sample ID: S-8 0.5'
**Lab Sample ID: 880-16241-12**
**Date Collected: 06/22/22 11:10** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:23 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:23 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:23 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:23 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:23 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 14:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *70 - 130* | *06/24/22 14:13* | *06/25/22 14:23* | *1* |
| *1,4-Difluorobenzene (Surr)* | *92* | | *70 - 130* | *06/24/22 14:13* | *06/25/22 14:23* | *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 | | | 06/27/22 12:48 | 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 | | | 06/24/22 10:29 | 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 | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 16:11 | 06/24/22 03:08 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 16:11 | 06/24/22 03:08 | 1 |
| Oll Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 06/23/22 16:11 | 06/24/22 03:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *110* | | *70 - 130* | *06/23/22 16:11* | *06/24/22 03:08* | *1* |
| *o-Terphenyl (Surr)* | *120* | | *70 - 130* | *06/23/22 16:11* | *06/24/22 03:08* | *1* |

### Method: 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **48.1** | | 4.99 | | mg/Kg | | | 06/28/22 08:59 | 1 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produced Water Release

Job ID: 880-16241-1
SDG: 22-0105-09

## 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) |
| 880-16241-1 | S-1 0.5' | 111 | 94 |
| 880-16241-1 MS | S-1 0.5' | 111 | 100 |
| 880-16241-1 MSD | S-1 0.5' | 110 | 99 |
| 880-16241-2 | S-1 1' | 112 | 93 |
| 880-16241-3 | S-2 0.5' | 117 | 90 |
| 880-16241-4 | S-2 1' | 116 | 89 |
| 880-16241-5 | S-3 0.5' | 112 | 88 |
| 880-16241-6 | S-3 1' | 119 | 90 |
| 880-16241-7 | S-4 0.5' | 117 | 89 |
| 880-16241-8 | S-4 1' | 116 | 88 |
| 880-16241-9 | S-5 0.5' | 118 | 89 |
| 880-16241-10 | S-6 0.5' | 116 | 87 |
| 880-16241-11 | S-7 0.5' | 113 | 97 |
| 880-16241-12 | S-8 0.5' | 112 | 92 |
| 880-16282-A-1-D MS | Matrix Spike | 119 | 99 |
| 880-16282-A-1-E MSD | Matrix Spike Duplicate | 124 | 84 |
| LCS 880-28354/1-A | Lab Control Sample | 127 | 106 |
| LCS 880-28363/1-A | Lab Control Sample | 110 | 98 |
| LCSD 880-28354/2-A | Lab Control Sample Dup | 110 | 99 |
| LCSD 880-28363/2-A | Lab Control Sample Dup | 107 | 100 |
| MB 880-28306/39 | Method Blank | 101 | 90 |
| MB 880-28354/5-A | Method Blank | 102 | 87 |
| MB 880-28363/5-A | Method Blank | 101 | 89 |

**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) |
| 880-16239-A-21-C MS | Matrix Spike | 111 | 102 |
| 880-16239-A-21-D MSD | Matrix Spike Duplicate | 113 | 105 |
| 880-16241-1 | S-1 0.5' | 111 | 115 |
| 880-16241-2 | S-1 1' | 115 | 123 |
| 880-16241-3 | S-2 0.5' | 115 | 121 |
| 880-16241-4 | S-2 1' | 110 | 115 |
| 880-16241-5 | S-3 0.5' | 109 | 112 |
| 880-16241-6 | S-3 1' | 105 | 108 |
| 880-16241-7 | S-4 0.5' | 119 | 122 |
| 880-16241-8 | S-4 1' | 126 | 134 S1+ |
| 880-16241-9 | S-5 0.5' | 103 | 108 |
| 880-16241-10 | S-6 0.5' | 113 | 121 |
| 880-16241-11 | S-7 0.5' | 123 | 134 S1+ |
| 880-16241-12 | S-8 0.5' | 110 | 120 |
| 890-2448-A-1-H MS | Matrix Spike | 96 | 95 |
| 890-2448-A-1-I MSD | Matrix Spike Duplicate | 101 | 94 |

# Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## 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) | | | | | | | | |
| LCS 880-28233/2-A | Lab Control Sample | 93 | 98 | | | | | | | | |
| LCS 880-28272/2-A | Lab Control Sample | 96 | 96 | | | | | | | | |
| LCSD 880-28233/3-A | Lab Control Sample Dup | 101 | 106 | | | | | | | | |
| LCSD 880-28272/3-A | Lab Control Sample Dup | 102 | 105 | | | | | | | | |
| MB 880-28233/1-A | Method Blank | 103 | 106 | | | | | | | | |
| MB 880-28272/1-A | Method Blank | 103 | 112 | | | | | | | | |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produced Water Release

Job ID: 880-16241-1
SDG: 22-0105-09

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

**Lab Sample ID: MB 880-28306/39**
**Matrix: Solid**
**Analysis Batch: 28306**

**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 | | | 06/24/22 22:17 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | | 06/24/22 22:17 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | | 06/24/22 22:17 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | | 06/24/22 22:17 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | | 06/24/22 22:17 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | | 06/24/22 22:17 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | | *06/24/22 22:17* | *1* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* | | *06/24/22 22:17* | *1* |

**Lab Sample ID: MB 880-28354/5-A**
**Matrix: Solid**
**Analysis Batch: 28306**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 28354**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 08:52 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 08:52 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 08:52 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 08:52 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 08:52 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 06/24/22 14:13 | 06/25/22 08:52 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | *06/24/22 14:13* | *06/25/22 08:52* | *1* |
| *1,4-Difluorobenzene (Surr)* | *87* | | *70 - 130* | *06/24/22 14:13* | *06/25/22 08:52* | *1* |

**Lab Sample ID: LCS 880-28354/1-A**
**Matrix: Solid**
**Analysis Batch: 28306**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 28354**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.07094 | | mg/Kg | | 71 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.07028 | | mg/Kg | | 70 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.07386 | | mg/Kg | | 74 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.1543 | | mg/Kg | | 77 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.08210 | | mg/Kg | | 82 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *127* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *106* | | *70 - 130* |

**Lab Sample ID: LCSD 880-28354/2-A**
**Matrix: Solid**
**Analysis Batch: 28306**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 28354**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.09324 | | mg/Kg | | 93 | 70 - 130 | 27 | 35 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produced Water Release

Job ID: 880-16241-1
SDG: 22-0105-09

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

**Lab Sample ID: LCSD 880-28354/2-A**
**Matrix: Solid**
**Analysis Batch: 28306**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 28354**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | | | 0.100 | 0.09103 | | mg/Kg | | 91 | 70 - 130 | 26 | 35 |
| Ethylbenzene | | | 0.100 | 0.09529 | | mg/Kg | | 95 | 70 - 130 | 25 | 35 |
| m,p-Xylenes | | | 0.200 | 0.1953 | | mg/Kg | | 98 | 70 - 130 | 23 | 35 |
| o-Xylene | | | 0.100 | 0.1001 | | mg/Kg | | 100 | 70 - 130 | 20 | 35 |

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

**Lab Sample ID: 880-16282-A-1-D MS**
**Matrix: Solid**
**Analysis Batch: 28306**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 28354**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U F2 F1 | 0.100 | 0.07260 | | mg/Kg | | 72 | 70 - 130 |
| Toluene | <0.00201 | U F2 F1 | 0.100 | 0.06776 | F1 | mg/Kg | | 66 | 70 - 130 |
| Ethylbenzene | <0.00201 | U F2 F1 | 0.100 | 0.06790 | F1 | mg/Kg | | 66 | 70 - 130 |
| m,p-Xylenes | <0.00402 | U F2 F1 | 0.200 | 0.1297 | F1 | mg/Kg | | 63 | 70 - 130 |
| o-Xylene | <0.00201 | U F2 F1 | 0.100 | 0.06945 | F1 | mg/Kg | | 68 | 70 - 130 |

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

**Lab Sample ID: 880-16282-A-1-E MSD**
**Matrix: Solid**
**Analysis Batch: 28306**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 28354**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U F2 F1 | 0.0990 | 0.03163 | F2 F1 | mg/Kg | | 31 | 70 - 130 | 79 | 35 |
| Toluene | <0.00201 | U F2 F1 | 0.0990 | 0.03840 | F2 F1 | mg/Kg | | 38 | 70 - 130 | 55 | 35 |
| Ethylbenzene | <0.00201 | U F2 F1 | 0.0990 | 0.04227 | F2 F1 | mg/Kg | | 41 | 70 - 130 | 47 | 35 |
| m,p-Xylenes | <0.00402 | U F2 F1 | 0.198 | 0.08106 | F2 F1 | mg/Kg | | 39 | 70 - 130 | 46 | 35 |
| o-Xylene | <0.00201 | U F2 F1 | 0.0990 | 0.04747 | F2 F1 | mg/Kg | | 47 | 70 - 130 | 38 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *124* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *84* | | *70 - 130* |

**Lab Sample ID: MB 880-28363/5-A**
**Matrix: Solid**
**Analysis Batch: 28398**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 28363**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:19 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:19 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:19 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:19 | 1 |

# QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

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

**Lab Sample ID: MB 880-28363/5-A** **Client Sample ID: Method Blank**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28398** **Prep Batch: 28363**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:19 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 06/24/22 15:16 | 06/25/22 21:19 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 21:19* | *1* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* | *06/24/22 15:16* | *06/25/22 21:19* | *1* |

**Lab Sample ID: LCS 880-28363/1-A** **Client Sample ID: Lab Control Sample**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28398** **Prep Batch: 28363**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1136 | | mg/Kg | | 114 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1103 | | mg/Kg | | 110 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1153 | | mg/Kg | | 115 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.2346 | | mg/Kg | | 117 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1196 | | mg/Kg | | 120 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *110* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *98* | | *70 - 130* |

**Lab Sample ID: LCSD 880-28363/2-A** **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28398** **Prep Batch: 28363**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1099 | | mg/Kg | | 110 | 70 - 130 | 3 | 35 |
| Toluene | | | 0.100 | 0.1041 | | mg/Kg | | 104 | 70 - 130 | 6 | 35 |
| Ethylbenzene | | | 0.100 | 0.1082 | | mg/Kg | | 108 | 70 - 130 | 6 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2204 | | mg/Kg | | 110 | 70 - 130 | 6 | 35 |
| o-Xylene | | | 0.100 | 0.1110 | | mg/Kg | | 111 | 70 - 130 | 7 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *100* | | *70 - 130* |

**Lab Sample ID: 880-16241-1 MS** **Client Sample ID: S-1 0.5'**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28398** **Prep Batch: 28363**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.100 | 0.1028 | | mg/Kg | | 103 | 70 - 130 | | |
| Toluene | <0.00201 | U | 0.100 | 0.09858 | | mg/Kg | | 98 | 70 - 130 | | |
| Ethylbenzene | <0.00201 | U | 0.100 | 0.1012 | | mg/Kg | | 101 | 70 - 130 | | |
| m,p-Xylenes | <0.00402 | U | 0.200 | 0.2077 | | mg/Kg | | 104 | 70 - 130 | | |
| o-Xylene | <0.00201 | U | 0.100 | 0.1035 | | mg/Kg | | 103 | 70 - 130 | | |

# QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

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

**Lab Sample ID: 880-16241-1 MS** **Client Sample ID: S-1 0.5'**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28398** **Prep Batch: 28363**

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 111 | | 70 - 130 |
| 1,4-Difluorobenzene (Surr) | 100 | | 70 - 130 |

**Lab Sample ID: 880-16241-1 MSD** **Client Sample ID: S-1 0.5'**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28398** **Prep Batch: 28363**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.0996 | 0.1015 | | mg/Kg | | 102 | 70 - 130 | 1 | 35 |
| Toluene | <0.00201 | U | 0.0996 | 0.09871 | | mg/Kg | | 99 | 70 - 130 | 0 | 35 |
| Ethylbenzene | <0.00201 | U | 0.0996 | 0.1014 | | mg/Kg | | 102 | 70 - 130 | 0 | 35 |
| m,p-Xylenes | <0.00402 | U | 0.199 | 0.2067 | | mg/Kg | | 104 | 70 - 130 | 0 | 35 |
| o-Xylene | <0.00201 | U | 0.0996 | 0.1030 | | mg/Kg | | 103 | 70 - 130 | 0 | 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 880-28233/1-A** **Client Sample ID: Method Blank**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28190** **Prep Batch: 28233**

| 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 | | 06/23/22 11:40 | 06/23/22 20:34 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 11:40 | 06/23/22 20:34 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 11:40 | 06/23/22 20:34 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1-Chlorooctane (Surr) | 103 | | 70 - 130 | 06/23/22 11:40 | 06/23/22 20:34 | 1 |
| o-Terphenyl (Surr) | 106 | | 70 - 130 | 06/23/22 11:40 | 06/23/22 20:34 | 1 |

**Lab Sample ID: LCS 880-28233/2-A** **Client Sample ID: Lab Control Sample**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28190** **Prep Batch: 28233**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 1169 | | mg/Kg | | 117 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 889.0 | | mg/Kg | | 89 | 70 - 130 | | |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 93 | | 70 - 130 |
| o-Terphenyl (Surr) | 98 | | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

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

**Lab Sample ID: LCSD 880-28233/3-A** **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28190** **Prep Batch: 28233**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 832.6 | *1 | mg/Kg | | 83 | 70 - 130 | 34 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 925.0 | | mg/Kg | | 92 | 70 - 130 | 4 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *101* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *106* | | *70 - 130* |

**Lab Sample ID: 890-2448-A-1-H MS** **Client Sample ID: Matrix Spike**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28190** **Prep Batch: 28233**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U *1 | 998 | 975.2 | | mg/Kg | | 94 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 998 | 915.8 | | mg/Kg | | 89 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *96* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *95* | | *70 - 130* |

**Lab Sample ID: 890-2448-A-1-I MSD** **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28190** **Prep Batch: 28233**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U *1 | 999 | 1048 | | mg/Kg | | 101 | 70 - 130 | 7 | 20 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 999 | 942.4 | | mg/Kg | | 92 | 70 - 130 | 3 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *101* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *94* | | *70 - 130* |

**Lab Sample ID: MB 880-28272/1-A** **Client Sample ID: Method Blank**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28196** **Prep Batch: 28272**

| 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 | | 06/23/22 16:11 | 06/23/22 20:12 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 16:11 | 06/23/22 20:12 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 06/23/22 16:11 | 06/23/22 20:12 | 1 |

# QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

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

**Lab Sample ID: MB 880-28272/1-A** **Client Sample ID: Method Blank**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28196** **Prep Batch: 28272**

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1-Chlorooctane (Surr) | 103 | | 70 - 130 | 06/23/22 16:11 | 06/23/22 20:12 | 1 |
| o-Terphenyl (Surr) | 112 | | 70 - 130 | 06/23/22 16:11 | 06/23/22 20:12 | 1 |

**Lab Sample ID: LCS 880-28272/2-A** **Client Sample ID: Lab Control Sample**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28196** **Prep Batch: 28272**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | 1000 | 1098 | | mg/Kg | | 110 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | 1000 | 863.7 | | mg/Kg | | 86 | 70 - 130 |

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

**Lab Sample ID: LCSD 880-28272/3-A** **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28196** **Prep Batch: 28272**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | 1000 | 1083 | | mg/Kg | | 108 | 70 - 130 | 1 | 20 |
| Diesel Range Organics (Over C10-C28) | 1000 | 975.6 | | mg/Kg | | 98 | 70 - 130 | 12 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 102 | | 70 - 130 |
| o-Terphenyl (Surr) | 105 | | 70 - 130 |

**Lab Sample ID: 880-16239-A-21-C MS** **Client Sample ID: Matrix Spike**
**Matrix: Solid** **Prep Type: Total/NA**
**Analysis Batch: 28196** **Prep Batch: 28272**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 998 | 1252 | | mg/Kg | | 125 | 70 - 130 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 998 | 878.5 | | mg/Kg | | 88 | 70 - 130 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1-Chlorooctane (Surr) | 111 | | 70 - 130 |
| o-Terphenyl (Surr) | 102 | | 70 - 130 |

# QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

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

**Lab Sample ID: 880-16239-A-21-D MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 28196** — **Prep Batch: 28272**

| 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 | 999 | 1256 | | mg/Kg | | 126 | 70 - 130 | 0 | 20 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 999 | 902.1 | | mg/Kg | | 90 | 70 - 130 | 3 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *113* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *105* | | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-28275/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 28540**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 06/28/22 04:22 | 1 |

**Lab Sample ID: LCS 880-28275/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 28540**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 261.6 | | mg/Kg | | 105 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-28275/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 28540**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 261.3 | | mg/Kg | | 105 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 880-16241-3 MS** — **Client Sample ID: S-2 0.5'**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 28540**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 95.2 | | 250 | 366.4 | | mg/Kg | | 109 | 90 - 110 | | |

**Lab Sample ID: 880-16241-3 MSD** — **Client Sample ID: S-2 0.5'**
**Matrix: Solid** — **Prep Type: Soluble**
**Analysis Batch: 28540**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 95.2 | | 250 | 366.5 | | mg/Kg | | 109 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## GC VOA

### Analysis Batch: 28306

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-11 | S-7 0.5' | Total/NA | Solid | 8021B | 28354 |
| 880-16241-12 | S-8 0.5' | Total/NA | Solid | 8021B | 28354 |
| MB 880-28306/39 | Method Blank | Total/NA | Solid | 8021B | |
| MB 880-28354/5-A | Method Blank | Total/NA | Solid | 8021B | 28354 |
| LCS 880-28354/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 28354 |
| LCSD 880-28354/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 28354 |
| 880-16282-A-1-D MS | Matrix Spike | Total/NA | Solid | 8021B | 28354 |
| 880-16282-A-1-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 8021B | 28354 |

### Prep Batch: 28354

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-11 | S-7 0.5' | Total/NA | Solid | 5035 | |
| 880-16241-12 | S-8 0.5' | Total/NA | Solid | 5035 | |
| MB 880-28354/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-28354/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-28354/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-16282-A-1-D MS | Matrix Spike | Total/NA | Solid | 5035 | |
| 880-16282-A-1-E MSD | Matrix Spike Duplicate | Total/NA | Solid | 5035 | |

### Prep Batch: 28363

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-1 | S-1 0.5' | Total/NA | Solid | 5035 | |
| 880-16241-2 | S-1 1' | Total/NA | Solid | 5035 | |
| 880-16241-3 | S-2 0.5' | Total/NA | Solid | 5035 | |
| 880-16241-4 | S-2 1' | Total/NA | Solid | 5035 | |
| 880-16241-5 | S-3 0.5' | Total/NA | Solid | 5035 | |
| 880-16241-6 | S-3 1' | Total/NA | Solid | 5035 | |
| 880-16241-7 | S-4 0.5' | Total/NA | Solid | 5035 | |
| 880-16241-8 | S-4 1' | Total/NA | Solid | 5035 | |
| 880-16241-9 | S-5 0.5' | Total/NA | Solid | 5035 | |
| 880-16241-10 | S-6 0.5' | Total/NA | Solid | 5035 | |
| MB 880-28363/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-28363/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-28363/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-16241-1 MS | S-1 0.5' | Total/NA | Solid | 5035 | |
| 880-16241-1 MSD | S-1 0.5' | Total/NA | Solid | 5035 | |

### Analysis Batch: 28398

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-1 | S-1 0.5' | Total/NA | Solid | 8021B | 28363 |
| 880-16241-2 | S-1 1' | Total/NA | Solid | 8021B | 28363 |
| 880-16241-3 | S-2 0.5' | Total/NA | Solid | 8021B | 28363 |
| 880-16241-4 | S-2 1' | Total/NA | Solid | 8021B | 28363 |
| 880-16241-5 | S-3 0.5' | Total/NA | Solid | 8021B | 28363 |
| 880-16241-6 | S-3 1' | Total/NA | Solid | 8021B | 28363 |
| 880-16241-7 | S-4 0.5' | Total/NA | Solid | 8021B | 28363 |
| 880-16241-8 | S-4 1' | Total/NA | Solid | 8021B | 28363 |
| 880-16241-9 | S-5 0.5' | Total/NA | Solid | 8021B | 28363 |
| 880-16241-10 | S-6 0.5' | Total/NA | Solid | 8021B | 28363 |
| MB 880-28363/5-A | Method Blank | Total/NA | Solid | 8021B | 28363 |
| LCS 880-28363/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 28363 |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## GC VOA (Continued)

### Analysis Batch: 28398 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCSD 880-28363/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 28363 |
| 880-16241-1 MS | S-1 0.5' | Total/NA | Solid | 8021B | 28363 |
| 880-16241-1 MSD | S-1 0.5' | Total/NA | Solid | 8021B | 28363 |

### Analysis Batch: 28470

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-1 | S-1 0.5' | Total/NA | Solid | Total BTEX | |
| 880-16241-2 | S-1 1' | Total/NA | Solid | Total BTEX | |
| 880-16241-3 | S-2 0.5' | Total/NA | Solid | Total BTEX | |
| 880-16241-4 | S-2 1' | Total/NA | Solid | Total BTEX | |
| 880-16241-5 | S-3 0.5' | Total/NA | Solid | Total BTEX | |
| 880-16241-6 | S-3 1' | Total/NA | Solid | Total BTEX | |
| 880-16241-7 | S-4 0.5' | Total/NA | Solid | Total BTEX | |
| 880-16241-8 | S-4 1' | Total/NA | Solid | Total BTEX | |
| 880-16241-9 | S-5 0.5' | Total/NA | Solid | Total BTEX | |
| 880-16241-10 | S-6 0.5' | Total/NA | Solid | Total BTEX | |
| 880-16241-11 | S-7 0.5' | Total/NA | Solid | Total BTEX | |
| 880-16241-12 | S-8 0.5' | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Analysis Batch: 28190

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-1 | S-1 0.5' | Total/NA | Solid | 8015B NM | 28233 |
| 880-16241-2 | S-1 1' | Total/NA | Solid | 8015B NM | 28233 |
| 880-16241-3 | S-2 0.5' | Total/NA | Solid | 8015B NM | 28233 |
| 880-16241-4 | S-2 1' | Total/NA | Solid | 8015B NM | 28233 |
| 880-16241-5 | S-3 0.5' | Total/NA | Solid | 8015B NM | 28233 |
| 880-16241-6 | S-3 1' | Total/NA | Solid | 8015B NM | 28233 |
| 880-16241-7 | S-4 0.5' | Total/NA | Solid | 8015B NM | 28233 |
| 880-16241-8 | S-4 1' | Total/NA | Solid | 8015B NM | 28233 |
| 880-16241-9 | S-5 0.5' | Total/NA | Solid | 8015B NM | 28233 |
| MB 880-28233/1-A | Method Blank | Total/NA | Solid | 8015B NM | 28233 |
| LCS 880-28233/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 28233 |
| LCSD 880-28233/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 28233 |
| 890-2448-A-1-H MS | Matrix Spike | Total/NA | Solid | 8015B NM | 28233 |
| 890-2448-A-1-I MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 28233 |

### Analysis Batch: 28196

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-10 | S-6 0.5' | Total/NA | Solid | 8015B NM | 28272 |
| 880-16241-11 | S-7 0.5' | Total/NA | Solid | 8015B NM | 28272 |
| 880-16241-12 | S-8 0.5' | Total/NA | Solid | 8015B NM | 28272 |
| MB 880-28272/1-A | Method Blank | Total/NA | Solid | 8015B NM | 28272 |
| LCS 880-28272/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 28272 |
| LCSD 880-28272/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 28272 |
| 880-16239-A-21-C MS | Matrix Spike | Total/NA | Solid | 8015B NM | 28272 |
| 880-16239-A-21-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015B NM | 28272 |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## GC Semi VOA

### Prep Batch: 28233

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-1 | S-1 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-16241-2 | S-1 1' | Total/NA | Solid | 8015NM Prep | |
| 880-16241-3 | S-2 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-16241-4 | S-2 1' | Total/NA | Solid | 8015NM Prep | |
| 880-16241-5 | S-3 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-16241-6 | S-3 1' | Total/NA | Solid | 8015NM Prep | |
| 880-16241-7 | S-4 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-16241-8 | S-4 1' | Total/NA | Solid | 8015NM Prep | |
| 880-16241-9 | S-5 0.5' | Total/NA | Solid | 8015NM Prep | |
| MB 880-28233/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-28233/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-28233/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 890-2448-A-1-H MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 890-2448-A-1-I MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Prep Batch: 28272

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-10 | S-6 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-16241-11 | S-7 0.5' | Total/NA | Solid | 8015NM Prep | |
| 880-16241-12 | S-8 0.5' | Total/NA | Solid | 8015NM Prep | |
| MB 880-28272/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-28272/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-28272/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-16239-A-21-C MS | Matrix Spike | Total/NA | Solid | 8015NM Prep | |
| 880-16239-A-21-D MSD | Matrix Spike Duplicate | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 28325

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-1 | S-1 0.5' | Total/NA | Solid | 8015 NM | |
| 880-16241-2 | S-1 1' | Total/NA | Solid | 8015 NM | |
| 880-16241-3 | S-2 0.5' | Total/NA | Solid | 8015 NM | |
| 880-16241-4 | S-2 1' | Total/NA | Solid | 8015 NM | |
| 880-16241-5 | S-3 0.5' | Total/NA | Solid | 8015 NM | |
| 880-16241-6 | S-3 1' | Total/NA | Solid | 8015 NM | |
| 880-16241-7 | S-4 0.5' | Total/NA | Solid | 8015 NM | |
| 880-16241-8 | S-4 1' | Total/NA | Solid | 8015 NM | |
| 880-16241-9 | S-5 0.5' | Total/NA | Solid | 8015 NM | |
| 880-16241-10 | S-6 0.5' | Total/NA | Solid | 8015 NM | |
| 880-16241-11 | S-7 0.5' | Total/NA | Solid | 8015 NM | |
| 880-16241-12 | S-8 0.5' | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 28275

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-1 | S-1 0.5' | Soluble | Solid | DI Leach | |
| 880-16241-2 | S-1 1' | Soluble | Solid | DI Leach | |
| 880-16241-3 | S-2 0.5' | Soluble | Solid | DI Leach | |
| 880-16241-4 | S-2 1' | Soluble | Solid | DI Leach | |
| 880-16241-5 | S-3 0.5' | Soluble | Solid | DI Leach | |
| 880-16241-6 | S-3 1' | Soluble | Solid | DI Leach | |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## HPLC/IC (Continued)

### Leach Batch: 28275 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-7 | S-4 0.5' | Soluble | Solid | DI Leach | |
| 880-16241-8 | S-4 1' | Soluble | Solid | DI Leach | |
| 880-16241-9 | S-5 0.5' | Soluble | Solid | DI Leach | |
| 880-16241-10 | S-6 0.5' | Soluble | Solid | DI Leach | |
| 880-16241-11 | S-7 0.5' | Soluble | Solid | DI Leach | |
| 880-16241-12 | S-8 0.5' | Soluble | Solid | DI Leach | |
| MB 880-28275/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-28275/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-28275/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-16241-3 MS | S-2 0.5' | Soluble | Solid | DI Leach | |
| 880-16241-3 MSD | S-2 0.5' | Soluble | Solid | DI Leach | |

### Analysis Batch: 28540

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-16241-1 | S-1 0.5' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-2 | S-1 1' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-3 | S-2 0.5' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-4 | S-2 1' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-5 | S-3 0.5' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-6 | S-3 1' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-7 | S-4 0.5' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-8 | S-4 1' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-9 | S-5 0.5' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-10 | S-6 0.5' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-11 | S-7 0.5' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-12 | S-8 0.5' | Soluble | Solid | 300.0 | 28275 |
| MB 880-28275/1-A | Method Blank | Soluble | Solid | 300.0 | 28275 |
| LCS 880-28275/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 28275 |
| LCSD 880-28275/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 28275 |
| 880-16241-3 MS | S-2 0.5' | Soluble | Solid | 300.0 | 28275 |
| 880-16241-3 MSD | S-2 0.5' | Soluble | Solid | 300.0 | 28275 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produced Water Release

Job ID: 880-16241-1
SDG: 22-0105-09

## Client Sample ID: S-1 0.5'
**Date Collected: 06/22/22 11:12**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-1
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.98 g | 5 mL | 28363 | 06/24/22 15:16 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28398 | 06/25/22 21:41 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 28233 | 06/23/22 13:00 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28190 | 06/24/22 02:32 | SM | XEN MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 28540 | 06/28/22 06:40 | SC | XEN MID |

## Client Sample ID: S-1 1'
**Date Collected: 06/22/22 11:14**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-2
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 28363 | 06/24/22 15:16 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28398 | 06/25/22 22:02 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 28233 | 06/23/22 13:00 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28190 | 06/24/22 02:53 | SM | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 28540 | 06/28/22 06:50 | SC | XEN MID |

## Client Sample ID: S-2 0.5'
**Date Collected: 06/22/22 11:16**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-3
**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 | 28363 | 06/24/22 15:16 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28398 | 06/25/22 22:22 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 28233 | 06/23/22 13:00 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28190 | 06/24/22 03:14 | SM | XEN MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 28540 | 06/28/22 06:59 | SC | XEN MID |

## Client Sample ID: S-2 1'
**Date Collected: 06/22/22 11:18**
**Date Received: 06/23/22 11:06**

## Lab Sample ID: 880-16241-4
**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 | | | 5.03 g | 5 mL | 28363 | 06/24/22 15:16 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28398 | 06/25/22 22:43 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produced Water Release

Job ID: 880-16241-1
SDG: 22-0105-09

## Client Sample ID: S-2 1'
**Date Collected: 06/22/22 11:18**
**Date Received: 06/23/22 11:06**

**Lab Sample ID: 880-16241-4**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 28233 | 06/23/22 13:00 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28190 | 06/24/22 03:35 | SM | XEN MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 28540 | 06/28/22 07:26 | SC | XEN MID |

## Client Sample ID: S-3 0.5'
**Date Collected: 06/22/22 11:20**
**Date Received: 06/23/22 11:06**

**Lab Sample ID: 880-16241-5**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.99 g | 5 mL | 28363 | 06/24/22 15:16 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28398 | 06/25/22 23:03 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 28233 | 06/23/22 13:00 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28190 | 06/24/22 03:56 | SM | XEN MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 28540 | 06/28/22 07:36 | SC | XEN MID |

## Client Sample ID: S-3 1'
**Date Collected: 06/22/22 11:22**
**Date Received: 06/23/22 11:06**

**Lab Sample ID: 880-16241-6**
**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 | | | 4.97 g | 5 mL | 28363 | 06/24/22 15:16 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28398 | 06/25/22 23:23 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.00 g | 10 mL | 28233 | 06/23/22 13:00 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28190 | 06/24/22 04:17 | SM | XEN MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 28540 | 06/28/22 08:03 | SC | XEN MID |

## Client Sample ID: S-4 0.5'
**Date Collected: 06/22/22 11:24**
**Date Received: 06/23/22 11:06**

**Lab Sample ID: 880-16241-7**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.02 g | 5 mL | 28363 | 06/24/22 15:16 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28398 | 06/25/22 23:44 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 28233 | 06/23/22 13:00 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28190 | 06/24/22 04:38 | SM | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## Client Sample ID: S-4 0.5'
**Lab Sample ID: 880-16241-7**
**Date Collected: 06/22/22 11:24** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 28540 | 06/28/22 08:13 | SC | XEN MID |

## Client Sample ID: S-4 1'
**Lab Sample ID: 880-16241-8**
**Date Collected: 06/22/22 11:26** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

| 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 | 28363 | 06/24/22 15:16 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28398 | 06/26/22 00:04 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 28233 | 06/23/22 13:00 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28190 | 06/24/22 04:59 | SM | XEN MID |
| Soluble | Leach | DI Leach | | | 4.95 g | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 28540 | 06/28/22 08:22 | SC | XEN MID |

## Client Sample ID: S-5 0.5'
**Lab Sample ID: 880-16241-9**
**Date Collected: 06/22/22 10:55** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

| 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 | 28363 | 06/24/22 15:16 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28398 | 06/26/22 00:25 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 28233 | 06/23/22 13:00 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28190 | 06/24/22 05:20 | SM | XEN MID |
| Soluble | Leach | DI Leach | | | 4.98 L | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 28540 | 06/28/22 08:31 | SC | XEN MID |

## Client Sample ID: S-6 0.5'
**Lab Sample ID: 880-16241-10**
**Date Collected: 06/22/22 11:00** **Matrix: Solid**
**Date Received: 06/23/22 11:06**

| 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 | 28363 | 06/24/22 15:16 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28398 | 06/26/22 00:45 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 28272 | 06/23/22 16:11 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28196 | 06/24/22 02:28 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 4.97 g | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 28540 | 06/28/22 08:40 | SC | XEN MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produced Water Release

Job ID: 880-16241-1
SDG: 22-0105-09

## Client Sample ID: S-7 0.5'

**Lab Sample ID: 880-16241-11**
**Matrix: Solid**
**Date Collected: 06/22/22 11:05**
**Date Received: 06/23/22 11:06**

| 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 | 28354 | 06/24/22 14:13 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28306 | 06/25/22 14:02 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.04 g | 10 mL | 28272 | 06/23/22 16:11 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28196 | 06/24/22 02:48 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 5 | | | 28540 | 06/28/22 08:49 | SC | XEN MID |

## Client Sample ID: S-8 0.5'

**Lab Sample ID: 880-16241-12**
**Matrix: Solid**
**Date Collected: 06/22/22 11:10**
**Date Received: 06/23/22 11:06**

| 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 | 28354 | 06/24/22 14:13 | MR | XEN MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 28306 | 06/25/22 14:23 | MR | XEN MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 28470 | 06/27/22 12:48 | SM | XEN MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 28325 | 06/24/22 10:29 | AJ | XEN MID |
| Total/NA | Prep | 8015NM Prep | | | 10.03 g | 10 mL | 28272 | 06/23/22 16:11 | DM | XEN MID |
| Total/NA | Analysis | 8015B NM | | 1 | | | 28196 | 06/24/22 03:08 | AJ | XEN MID |
| Soluble | Leach | DI Leach | | | 5.01 g | 50 mL | 28275 | 06/23/22 16:38 | CH | XEN MID |
| Soluble | Analysis | 300.0 | | 1 | | | 28540 | 06/28/22 08:59 | SC | 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. Job ID: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

## 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: 880-16241-1
Project/Site: SD 19 CTB Produced Water Release SDG: 22-0105-09

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

**Protocol References:**

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produced Water Release

Job ID: 880-16241-1
SDG: 22-0105-09

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-16241-1 | S-1 0.5' | Solid | 06/22/22 11:12 | 06/23/22 11:06 |
| 880-16241-2 | S-1 1' | Solid | 06/22/22 11:14 | 06/23/22 11:06 |
| 880-16241-3 | S-2 0.5' | Solid | 06/22/22 11:16 | 06/23/22 11:06 |
| 880-16241-4 | S-2 1' | Solid | 06/22/22 11:18 | 06/23/22 11:06 |
| 880-16241-5 | S-3 0.5' | Solid | 06/22/22 11:20 | 06/23/22 11:06 |
| 880-16241-6 | S-3 1' | Solid | 06/22/22 11:22 | 06/23/22 11:06 |
| 880-16241-7 | S-4 0.5' | Solid | 06/22/22 11:24 | 06/23/22 11:06 |
| 880-16241-8 | S-4 1' | Solid | 06/22/22 11:26 | 06/23/22 11:06 |
| 880-16241-9 | S-5 0.5' | Solid | 06/22/22 10:55 | 06/23/22 11:06 |
| 880-16241-10 | S-6 0.5' | Solid | 06/22/22 11:00 | 06/23/22 11:06 |
| 880-16241-11 | S-7 0.5' | Solid | 06/22/22 11:05 | 06/23/22 11:06 |
| 880-16241-12 | S-8 0.5' | Solid | 06/22/22 11:10 | 06/23/22 11:06 |

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No. 2624

160241

# CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N Marienfeld, Ste 202
Midland, TX 79701
432-687-0901

DATE: 6/23/2022 PAGE 1 OF 1

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: SD 19 CTB Produced Water Release

LAI PROJECT #: 22-0105-09 COLLECTOR: DSG/TP

Data Reported to

TRRP report? ☐ Yes ☒ No

TIME ZONE
Time zone/State: MNT/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐

| Field Sample I D | Lab # | Date | Time | Matrix | # of Containers | HCl | $HNO_3$ | $H_2SO_4$ NaOH | ICE | UNPRESERVED | ANALYSES | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-1 0.5' | | 6/22/22 | 1112 | S | 1 | | | | X | | X X X X X | |
| S-1 1' | | | 1114 | | | | | | | | | |
| S-2 0.5 | | | 1116 | | | | | | | | | |
| S-2 1 | | | 1118 | | | | | | | | | |
| S-3 0.5 | | | 1120 | | | | | | | | | |
| S-3 1' | | | 1122 | | | | | | | | | |
| S-4 0.5' | | | 1124 | | | | | | | | | |
| S-4 1' | | | 1126 | | | | | | | | | |
| S-5 0.5' | | | 1055 | | | | | | | | | |
| S-6 0.5' | | | 1100 | | | | | | | | | |
| S-7 0.5 | | | 1105 | | | | | | | | | |
| S-8 05 | | | 1110 | | | | | | | | | |

880-16241 Chain of Custody

TOTAL 12

| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
|---|---|---|
| Daniel St Germain | 6/23/22/1104 | |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |

LABORATORY Xenco

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

**LABORATORY USE ONLY:**
RECEIVING TEMP 4.2 THERM#: IR2 #2
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☒ HAND DELIVERED

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Received by OCD: 8/23/2023 10:40:52 AM

Released to Imaging: 12/5/2023 1:12:27 PM

6/29/2022

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-16241-1
SDG Number: 22-0105-09

**Login Number: 16241**
**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 | |

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 5/2/2023 12:45:54 PM

## JOB DESCRIPTION

SD 19 CTB Produce Water
SDG NUMBER 22-0105-09

## JOB NUMBER

880-27756-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.



Released to Imaging: 12/5/2023 1:12:27 PM

my EOL

# Eurofins Midland

## Job Notes

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

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

## Authorization

Holly Taylor

Generated
5/2/2023 12:45:54 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Laboratory Job ID: 880-27756-1
SDG: 22-0105-09

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# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-27756-1
Project/Site: SD 19 CTB Produce Water SDG: 22-0105-09

## Qualifiers

### GC VOA

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

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

## Job ID: 880-27756-1

### Laboratory: Eurofins Midland

**Narrative**

**Job Narrative**
**880-27756-1**

**Receipt**
The samples were received on 5/1/2023 9:36 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -1.3°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: C-1 , 4.1' (880-27756-1), C-2 , 2' (880-27756-2), C-3 , 0-4.1' (880-27756-3) and C-4 , 0-2' (880-27756-4).

**GC VOA**
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-52264 and analytical batch 880-52252 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-52254/5-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.

**GC Semi VOA**
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-52286 and analytical batch 880-52249 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: C-4 , 0-2' (880-27756-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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



Released to Imaging: 12/5/2023 1:12:27 PM

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

## Client Sample ID: C-1 , 4.1'

**Date Collected: 04/28/23 10:05**
**Date Received: 05/01/23 09:36**

## Lab Sample ID: 880-27756-1

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:05 | 1 |
| Toluene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:05 | 1 |
| Ethylbenzene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:05 | 1 |
| m,p-Xylenes | <0.00398 | U | 0.00398 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:05 | 1 |
| o-Xylene | <0.00199 | U | 0.00199 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:05 | 1 |
| Xylenes, Total | <0.00398 | U | 0.00398 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *76* | | *70 - 130* | *05/01/23 09:43* | *05/01/23 22:05* | *1* |
| *1,4-Difluorobenzene (Surr)* | *93* | | *70 - 130* | *05/01/23 09:43* | *05/01/23 22:05* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00398 | U | 0.00398 | | mg/Kg | | | 05/02/23 11:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/02/23 10:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 12:54 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 12:54 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 12:54 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *101* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 12:54* | *1* |
| *o-Terphenyl (Surr)* | *112* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 12:54* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **121** | | 5.04 | | mg/Kg | | | 05/01/23 17:39 | 1 |

## Client Sample ID: C-2 , 2'

**Date Collected: 04/28/23 10:10**
**Date Received: 05/01/23 09:36**

## Lab Sample ID: 880-27756-2

**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:25 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:25 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:25 | 1 |
| m,p-Xylenes | <0.00399 | U | 0.00399 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:25 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:25 | 1 |
| Xylenes, Total | <0.00399 | U | 0.00399 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:25 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *80* | | *70 - 130* | *05/01/23 09:43* | *05/01/23 22:25* | *1* |
| *1,4-Difluorobenzene (Surr)* | *84* | | *70 - 130* | *05/01/23 09:43* | *05/01/23 22:25* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

## Client Sample ID: C-2 , 2'
**Date Collected: 04/28/23 10:10**
**Date Received: 05/01/23 09:36**

## Lab Sample ID: 880-27756-2
**Matrix: Solid**

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00399 | U | 0.00399 | | mg/Kg | | | 05/02/23 11:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 05/02/23 10:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 13:16 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 13:16 | 1 |
| Oil Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 13:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *104* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 13:16* | *1* |
| *o-Terphenyl (Surr)* | *114* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 13:16* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **126** | | 5.00 | | mg/Kg | | | 05/01/23 17:44 | 1 |

## Client Sample ID: C-3 , 0-4.1'
**Date Collected: 04/28/23 10:15**
**Date Received: 05/01/23 09:36**

## Lab Sample ID: 880-27756-3
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:46 | 1 |
| Toluene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:46 | 1 |
| Ethylbenzene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:46 | 1 |
| m,p-Xylenes | <0.00402 | U | 0.00402 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:46 | 1 |
| o-Xylene | <0.00201 | U | 0.00201 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:46 | 1 |
| Xylenes, Total | <0.00402 | U | 0.00402 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 22:46 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | *05/01/23 09:43* | *05/01/23 22:46* | *1* |
| *1,4-Difluorobenzene (Surr)* | *75* | | *70 - 130* | *05/01/23 09:43* | *05/01/23 22:46* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00402 | U | 0.00402 | | mg/Kg | | | 05/02/23 11:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/02/23 10:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 13:38 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 13:38 | 1 |

# Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-27756-1
Project/Site: SD 19 CTB Produce Water SDG: 22-0105-09

## Client Sample ID: C-3 , 0-4.1' Lab Sample ID: 880-27756-3
**Date Collected: 04/28/23 10:15** **Matrix: Solid**
**Date Received: 05/01/23 09:36**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oll Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 13:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *98* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 13:38* | *1* |
| *o-Terphenyl (Surr)* | *104* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 13:38* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **445** | | 4.97 | | mg/Kg | | | 05/01/23 17:49 | 1 |

## Client Sample ID: C-4 , 0-2' Lab Sample ID: 880-27756-4
**Date Collected: 04/28/23 10:20** **Matrix: Solid**
**Date Received: 05/01/23 09:36**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 23:06 | 1 |
| Toluene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 23:06 | 1 |
| Ethylbenzene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 23:06 | 1 |
| m,p-Xylenes | <0.00404 | U | 0.00404 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 23:06 | 1 |
| o-Xylene | <0.00202 | U | 0.00202 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 23:06 | 1 |
| Xylenes, Total | <0.00404 | U | 0.00404 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 23:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *82* | | *70 - 130* | *05/01/23 09:43* | *05/01/23 23:06* | *1* |
| *1,4-Difluorobenzene (Surr)* | *82* | | *70 - 130* | *05/01/23 09:43* | *05/01/23 23:06* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | | mg/Kg | | | 05/02/23 11:35 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <50.0 | U | 50.0 | | mg/Kg | | | 05/02/23 10:40 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 11:49 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 11:49 | 1 |
| Oll Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 10:35 | 05/01/23 11:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *128* | | *70 - 130* | *05/01/23 10:35* | *05/01/23 11:49* | *1* |
| *o-Terphenyl (Surr)* | *135* | *S1+* | *70 - 130* | *05/01/23 10:35* | *05/01/23 11:49* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **197** | | 4.95 | | mg/Kg | | | 05/01/23 17:54 | 1 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | BFB1 | DFBZ1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-27756-1 | C-1 , 4.1' | 76 | 93 |
| 880-27756-1 MS | C-1 , 4.1' | 111 | 107 |
| 880-27756-1 MSD | C-1 , 4.1' | 107 | 108 |
| 880-27756-2 | C-2 , 2' | 80 | 84 |
| 880-27756-3 | C-3 , 0-4.1' | 99 | 75 |
| 880-27756-4 | C-4 , 0-2' | 82 | 82 |
| LCS 880-52264/1-A | Lab Control Sample | 101 | 104 |
| LCSD 880-52264/2-A | Lab Control Sample Dup | 110 | 105 |
| MB 880-52254/5-A | Method Blank | 68 S1- | 91 |
| MB 880-52264/5-A | Method Blank | 66 S1- | 78 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | 1CO1 | OTPH1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-27756-1 | C-1 , 4.1' | 101 | 112 |
| 880-27756-2 | C-2 , 2' | 104 | 114 |
| 880-27756-3 | C-3 , 0-4.1' | 98 | 104 |
| 880-27756-4 | C-4 , 0-2' | 128 | 135 S1+ |
| 880-27756-4 MS | C-4 , 0-2' | 83 | 81 |
| 880-27756-4 MSD | C-4 , 0-2' | 84 | 84 |
| LCS 880-52286/2-A | Lab Control Sample | 98 | 104 |
| LCSD 880-52286/3-A | Lab Control Sample Dup | 114 | 120 |
| MB 880-52286/1-A | Method Blank | 113 | 134 S1+ |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

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

**Lab Sample ID: MB 880-52254/5-A**
**Matrix: Solid**
**Analysis Batch: 52252**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 52254**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 05/01/23 09:09 | 05/01/23 11:06 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *68* | *S1-* | *70 - 130* | *05/01/23 09:09* | *05/01/23 11:06* | *1* |
| *1,4-Difluorobenzene (Surr)* | *91* | | *70 - 130* | *05/01/23 09:09* | *05/01/23 11:06* | *1* |

**Lab Sample ID: MB 880-52264/5-A**
**Matrix: Solid**
**Analysis Batch: 52252**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 52264**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 21:43 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 21:43 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 21:43 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 21:43 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 21:43 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 05/01/23 09:43 | 05/01/23 21:43 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *66* | *S1-* | *70 - 130* | *05/01/23 09:43* | *05/01/23 21:43* | *1* |
| *1,4-Difluorobenzene (Surr)* | *78* | | *70 - 130* | *05/01/23 09:43* | *05/01/23 21:43* | *1* |

**Lab Sample ID: LCS 880-52264/1-A**
**Matrix: Solid**
**Analysis Batch: 52252**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 52264**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1156 | | mg/Kg | | 116 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1027 | | mg/Kg | | 103 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1027 | | mg/Kg | | 103 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.2043 | | mg/Kg | | 102 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1007 | | mg/Kg | | 101 | 70 - 130 | | |

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

**Lab Sample ID: LCSD 880-52264/2-A**
**Matrix: Solid**
**Analysis Batch: 52252**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 52264**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1169 | | mg/Kg | | 117 | 70 - 130 | 1 | 35 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

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

**Lab Sample ID: LCSD 880-52264/2-A**
**Matrix: Solid**
**Analysis Batch: 52252**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 52264**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | | | 0.100 | 0.1109 | | mg/Kg | | 111 | 70 - 130 | 8 | 35 |
| Ethylbenzene | | | 0.100 | 0.1182 | | mg/Kg | | 118 | 70 - 130 | 14 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2364 | | mg/Kg | | 118 | 70 - 130 | 15 | 35 |
| o-Xylene | | | 0.100 | 0.1163 | | mg/Kg | | 116 | 70 - 130 | 14 | 35 |

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

**Lab Sample ID: 880-27756-1 MS**
**Matrix: Solid**
**Analysis Batch: 52252**

**Client Sample ID: C-1 , 4.1'**
**Prep Type: Total/NA**
**Prep Batch: 52264**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.0998 | 0.1129 | | mg/Kg | | 113 | 70 - 130 |
| Toluene | <0.00199 | U | 0.0998 | 0.1018 | | mg/Kg | | 102 | 70 - 130 |
| Ethylbenzene | <0.00199 | U | 0.0998 | 0.1070 | | mg/Kg | | 107 | 70 - 130 |
| m,p-Xylenes | <0.00398 | U | 0.200 | 0.2147 | | mg/Kg | | 108 | 70 - 130 |
| o-Xylene | <0.00199 | U | 0.0998 | 0.1058 | | mg/Kg | | 106 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *107* | | *70 - 130* |

**Lab Sample ID: 880-27756-1 MSD**
**Matrix: Solid**
**Analysis Batch: 52252**

**Client Sample ID: C-1 , 4.1'**
**Prep Type: Total/NA**
**Prep Batch: 52264**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | U | 0.100 | 0.1131 | | mg/Kg | | 113 | 70 - 130 | 0 | 35 |
| Toluene | <0.00199 | U | 0.100 | 0.09655 | | mg/Kg | | 96 | 70 - 130 | 5 | 35 |
| Ethylbenzene | <0.00199 | U | 0.100 | 0.09978 | | mg/Kg | | 100 | 70 - 130 | 7 | 35 |
| m,p-Xylenes | <0.00398 | U | 0.200 | 0.2002 | | mg/Kg | | 100 | 70 - 130 | 7 | 35 |
| o-Xylene | <0.00199 | U | 0.100 | 0.09845 | | mg/Kg | | 98 | 70 - 130 | 7 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *108* | | *70 - 130* |

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

**Lab Sample ID: MB 880-52286/1-A**
**Matrix: Solid**
**Analysis Batch: 52249**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 52286**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 08:35 | 05/01/23 10:23 | 1 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

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

**Lab Sample ID: MB 880-52286/1-A**
**Matrix: Solid**
**Analysis Batch: 52249**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 52286**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 08:35 | 05/01/23 10:23 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 05/01/23 08:35 | 05/01/23 10:23 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *113* | | *70 - 130* | *05/01/23 08:35* | *05/01/23 10:23* | *1* |
| *o-Terphenyl (Surr)* | *134* | *S1+* | *70 - 130* | *05/01/23 08:35* | *05/01/23 10:23* | *1* |

**Lab Sample ID: LCS 880-52286/2-A**
**Matrix: Solid**
**Analysis Batch: 52249**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 52286**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 829.8 | | mg/Kg | | 83 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 764.3 | | mg/Kg | | 76 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *98* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *104* | | *70 - 130* |

**Lab Sample ID: LCSD 880-52286/3-A**
**Matrix: Solid**
**Analysis Batch: 52249**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 52286**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 902.4 | | mg/Kg | | 90 | 70 - 130 | 8 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 899.4 | | mg/Kg | | 90 | 70 - 130 | 16 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *114* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *120* | | *70 - 130* |

**Lab Sample ID: 880-27756-4 MS**
**Matrix: Solid**
**Analysis Batch: 52249**

**Client Sample ID: C-4 , 0-2'**
**Prep Type: Total/NA**
**Prep Batch: 52286**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 998 | 1054 | | mg/Kg | | 106 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 998 | 773.6 | | mg/Kg | | 76 | 70 - 130 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *83* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *81* | | *70 - 130* |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

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

**Lab Sample ID: 880-27756-4 MSD**
**Matrix: Solid**
**Analysis Batch: 52249**

**Client Sample ID: C-4 , 0-2'**
**Prep Type: Total/NA**
**Prep Batch: 52286**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 997 | 1184 | | mg/Kg | | 119 | 70 - 130 | 12 | 20 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 997 | 800.7 | | mg/Kg | | 79 | 70 - 130 | 3 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *84* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *84* | | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-52207/1-A**
**Matrix: Solid**
**Analysis Batch: 52288**

**Client Sample ID: Method Blank**
**Prep Type: Soluble**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 05/01/23 15:29 | 1 |

**Lab Sample ID: LCS 880-52207/2-A**
**Matrix: Solid**
**Analysis Batch: 52288**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 270.3 | | mg/Kg | | 108 | 90 - 110 | | |

**Lab Sample ID: LCSD 880-52207/3-A**
**Matrix: Solid**
**Analysis Batch: 52288**

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

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 250 | 263.1 | | mg/Kg | | 105 | 90 - 110 | 3 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

## GC VOA

### Analysis Batch: 52252

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27756-1 | C-1 , 4.1' | Total/NA | Solid | 8021B | 52264 |
| 880-27756-2 | C-2 , 2' | Total/NA | Solid | 8021B | 52264 |
| 880-27756-3 | C-3 , 0-4.1' | Total/NA | Solid | 8021B | 52264 |
| 880-27756-4 | C-4 , 0-2' | Total/NA | Solid | 8021B | 52264 |
| MB 880-52254/5-A | Method Blank | Total/NA | Solid | 8021B | 52254 |
| MB 880-52264/5-A | Method Blank | Total/NA | Solid | 8021B | 52264 |
| LCS 880-52264/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 52264 |
| LCSD 880-52264/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 52264 |
| 880-27756-1 MS | C-1 , 4.1' | Total/NA | Solid | 8021B | 52264 |
| 880-27756-1 MSD | C-1 , 4.1' | Total/NA | Solid | 8021B | 52264 |

### Prep Batch: 52254

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 880-52254/5-A | Method Blank | Total/NA | Solid | 5035 | |

### Prep Batch: 52264

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27756-1 | C-1 , 4.1' | Total/NA | Solid | 5035 | |
| 880-27756-2 | C-2 , 2' | Total/NA | Solid | 5035 | |
| 880-27756-3 | C-3 , 0-4.1' | Total/NA | Solid | 5035 | |
| 880-27756-4 | C-4 , 0-2' | Total/NA | Solid | 5035 | |
| MB 880-52264/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-52264/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-52264/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |
| 880-27756-1 MS | C-1 , 4.1' | Total/NA | Solid | 5035 | |
| 880-27756-1 MSD | C-1 , 4.1' | Total/NA | Solid | 5035 | |

### Analysis Batch: 52394

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27756-1 | C-1 , 4.1' | Total/NA | Solid | Total BTEX | |
| 880-27756-2 | C-2 , 2' | Total/NA | Solid | Total BTEX | |
| 880-27756-3 | C-3 , 0-4.1' | Total/NA | Solid | Total BTEX | |
| 880-27756-4 | C-4 , 0-2' | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Analysis Batch: 52249

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27756-1 | C-1 , 4.1' | Total/NA | Solid | 8015B NM | 52286 |
| 880-27756-2 | C-2 , 2' | Total/NA | Solid | 8015B NM | 52286 |
| 880-27756-3 | C-3 , 0-4.1' | Total/NA | Solid | 8015B NM | 52286 |
| 880-27756-4 | C-4 , 0-2' | Total/NA | Solid | 8015B NM | 52286 |
| MB 880-52286/1-A | Method Blank | Total/NA | Solid | 8015B NM | 52286 |
| LCS 880-52286/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 52286 |
| LCSD 880-52286/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 52286 |
| 880-27756-4 MS | C-4 , 0-2' | Total/NA | Solid | 8015B NM | 52286 |
| 880-27756-4 MSD | C-4 , 0-2' | Total/NA | Solid | 8015B NM | 52286 |

### Prep Batch: 52286

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27756-1 | C-1 , 4.1' | Total/NA | Solid | 8015NM Prep | |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

## GC Semi VOA (Continued)

### Prep Batch: 52286 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27756-2 | C-2 , 2' | Total/NA | Solid | 8015NM Prep | |
| 880-27756-3 | C-3 , 0-4.1' | Total/NA | Solid | 8015NM Prep | |
| 880-27756-4 | C-4 , 0-2' | Total/NA | Solid | 8015NM Prep | |
| MB 880-52286/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-52286/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-52286/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |
| 880-27756-4 MS | C-4 , 0-2' | Total/NA | Solid | 8015NM Prep | |
| 880-27756-4 MSD | C-4 , 0-2' | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 52379

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27756-1 | C-1 , 4.1' | Total/NA | Solid | 8015 NM | |
| 880-27756-2 | C-2 , 2' | Total/NA | Solid | 8015 NM | |
| 880-27756-3 | C-3 , 0-4.1' | Total/NA | Solid | 8015 NM | |
| 880-27756-4 | C-4 , 0-2' | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 52207

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27756-1 | C-1 , 4.1' | Soluble | Solid | DI Leach | |
| 880-27756-2 | C-2 , 2' | Soluble | Solid | DI Leach | |
| 880-27756-3 | C-3 , 0-4.1' | Soluble | Solid | DI Leach | |
| 880-27756-4 | C-4 , 0-2' | Soluble | Solid | DI Leach | |
| MB 880-52207/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-52207/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-52207/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |

### Analysis Batch: 52288

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-27756-1 | C-1 , 4.1' | Soluble | Solid | 300.0 | 52207 |
| 880-27756-2 | C-2 , 2' | Soluble | Solid | 300.0 | 52207 |
| 880-27756-3 | C-3 , 0-4.1' | Soluble | Solid | 300.0 | 52207 |
| 880-27756-4 | C-4 , 0-2' | Soluble | Solid | 300.0 | 52207 |
| MB 880-52207/1-A | Method Blank | Soluble | Solid | 300.0 | 52207 |
| LCS 880-52207/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 52207 |
| LCSD 880-52207/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 52207 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

## Client Sample ID: C-1 , 4.1'
**Date Collected: 04/28/23 10:05**
**Date Received: 05/01/23 09:36**

## Lab Sample ID: 880-27756-1
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.03 g | 5 mL | 52264 | 05/01/23 09:43 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 52252 | 05/01/23 22:05 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 52394 | 05/02/23 11:35 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 52379 | 05/02/23 10:40 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 52286 | 05/01/23 10:35 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52249 | 05/01/23 12:54 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.96 g | 50 mL | 52207 | 05/01/23 10:30 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 52288 | 05/01/23 17:39 | SMC | EET MID |

## Client Sample ID: C-2 , 2'
**Date Collected: 04/28/23 10:10**
**Date Received: 05/01/23 09:36**

## Lab Sample ID: 880-27756-2
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 5.01 g | 5 mL | 52264 | 05/01/23 09:43 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 52252 | 05/01/23 22:25 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 52394 | 05/02/23 11:35 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 52379 | 05/02/23 10:40 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 52286 | 05/01/23 10:35 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52249 | 05/01/23 13:16 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5 g | 50 mL | 52207 | 05/01/23 10:30 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 52288 | 05/01/23 17:44 | SMC | EET MID |

## Client Sample ID: C-3 , 0-4.1'
**Date Collected: 04/28/23 10:15**
**Date Received: 05/01/23 09:36**

## Lab Sample ID: 880-27756-3
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.97 g | 5 mL | 52264 | 05/01/23 09:43 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 52252 | 05/01/23 22:46 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 52394 | 05/02/23 11:35 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 52379 | 05/02/23 10:40 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 52286 | 05/01/23 10:35 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52249 | 05/01/23 13:38 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.03 g | 50 mL | 52207 | 05/01/23 10:30 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 52288 | 05/01/23 17:49 | SMC | EET MID |

## Client Sample ID: C-4 , 0-2'
**Date Collected: 04/28/23 10:20**
**Date Received: 05/01/23 09:36**

## Lab Sample ID: 880-27756-4
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.95 g | 5 mL | 52264 | 05/01/23 09:43 | MNR | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 52252 | 05/01/23 23:06 | MNR | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 52394 | 05/02/23 11:35 | SM | EET MID |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

## Client Sample ID: C-4 , 0-2'
**Date Collected: 04/28/23 10:20**
**Date Received: 05/01/23 09:36**

## Lab Sample ID: 880-27756-4
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8015 NM | | 1 | | | 52379 | 05/02/23 10:40 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 52286 | 05/01/23 10:35 | AJ | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 52249 | 05/01/23 11:49 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.05 g | 50 mL | 52207 | 05/01/23 10:30 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 52288 | 05/01/23 17:54 | SMC | EET MID |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-27756-1
Project/Site: SD 19 CTB Produce Water SDG: 22-0105-09

## Laboratory: Eurofins Midland

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

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Texas | NELAP | T104704400-22-25 | 06-30-23 |

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

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

# Method Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

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

**Protocol References:**

ASTM = ASTM International
EPA = US Environmental Protection Agency
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB Produce Water

Job ID: 880-27756-1
SDG: 22-0105-09

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-27756-1 | C-1 , 4.1' | Solid | 04/28/23 10:05 | 05/01/23 09:36 |
| 880-27756-2 | C-2 , 2' | Solid | 04/28/23 10:10 | 05/01/23 09:36 |
| 880-27756-3 | C-3 , 0-4.1' | Solid | 04/28/23 10:15 | 05/01/23 09:36 |
| 880-27756-4 | C-4 , 0-2' | Solid | 04/28/23 10:20 | 05/01/23 09:36 |

Released to Imaging: 12/5/2023 1:12:27 PM
Received by OCD: 8/23/2023 10:40:52 AM

27756 No. 2994

# CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE 4-28-23 PAGE 1 OF 1
PO# _____ LAB WORK ORDER# _____
PROJECT LOCATION OR NAME SD 19 CTB Produce Water
LAI PROJECT # 22-0105-09 COLLECTOR KG

Data Reported to

TRRP report? ☐ Yes ☒ No
TIME ZONE Time zone/State MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☐ MTBE ☐ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ 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 ☐ PECHLORATE ☐ | CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

| Field Sample I D | Lab # | Date | Time | Matrix | # of Containers | HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | BTEX | MTBE | TRPH 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 | 8082 PCBS | TCLP - METALS (RCRA) | TCLP VOC | TCLP - PEST | HERB | 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 | PECHLORATE | CHLORIDE | ANIONS | ALKALINITY | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C-1, 4.1' | | 4-28-23 | 1005 | S | 1 | | | | X | | X | | X | X | | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 202 |
| C-2, 2' | | | 1015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C-3, 0-4.1' | | | 1020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C-4, 0-2' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

880-27756 Chain of Custody

TOTAL 4

| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
|---|---|---|
| Daniel Gee | 5/11/23 | 9:36 Kelsey Rice |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |
| RELINQUISHED BY (Signature) | DATE/TIME | RECEIVED BY (Signature) |

LABORATORY Xenco

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

**LABORATORY USE ONLY:**
RECEIVING TEMP 1.6/1.3 THERM# IR0 #36
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-27756-1
SDG Number: 22-0105-09

**Login Number: 27756**
**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 | |

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 6/6/2023 12:31:15 PM

## JOB DESCRIPTION

SD 19 CTB PW Release
SDG NUMBER 22-0105-09

## JOB NUMBER

880-29009-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.



Released to Imaging: 12/5/2023 1:12:27 PM

my EOL

# Eurofins Midland

## Job Notes

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

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

## Authorization

Holly Taylor

Generated
6/6/2023 12:31:15 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Laboratory Job ID: 880-29009-1
SDG: 22-0105-09

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# Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-29009-1
Project/Site: SD 19 CTB PW Release SDG: 22-0105-09

## Qualifiers

### GC VOA

| Qualifier | Qualifier Description |
|---|---|
| *- | LCS and/or LCSD is outside acceptance limits, low biased. |
| *+ | LCS and/or LCSD is outside acceptance limits, high biased. |
| *1 | LCS/LCSD RPD exceeds control limits. |
| S1- | Surrogate recovery exceeds control limits, low biased. |
| U | Indicates the analyte was analyzed for but not detected. |

### GC Semi VOA

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

### HPLC/IC

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

## Glossary

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

# Case Narrative

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Job ID: 880-29009-1
SDG: 22-0105-09

## Job ID: 880-29009-1

**Laboratory: Eurofins Midland**

**Narrative**

**Job Narrative**
**880-29009-1**

**Receipt**
The samples were received on 6/1/2023 3:13 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

**Receipt Exceptions**
The following samples were received and analyzed from an unpreserved bulk soil jar: C-5, 1' (880-29009-1) and C-6, 0-1' (880-29009-2).

**GC VOA**
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-54717 recovered above the upper control limit for Benzene, Toluene and Ethylbenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-54717/2), (CCV 880-54717/20) and (CCV 880-54717/33).

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-54723 and 880-54723 and analytical batch 880-54717 recovered outside control limits for the following analytes: Benzene, Toluene, Ethylbenzene and o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-54723 and analytical batch 880-54717 was outside the control limits.

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

**GC Semi VOA**
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-54621 and analytical batch 880-54612 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: C-5, 1' (880-29009-1) and C-6, 0-1' (880-29009-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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



Released to Imaging: 12/5/2023 1:12:27 PM

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Job ID: 880-29009-1
SDG: 22-0105-09

## Client Sample ID: C-5, 1'

**Date Collected: 05/31/23 12:00**
**Date Received: 06/01/23 15:13**

**Lab Sample ID: 880-29009-1**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | U *+ | 0.00198 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:16 | 1 |
| Toluene | <0.00198 | U *+ | 0.00198 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:16 | 1 |
| Ethylbenzene | <0.00198 | U *+ | 0.00198 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:16 | 1 |
| m,p-Xylenes | <0.00396 | U | 0.00396 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:16 | 1 |
| o-Xylene | <0.00198 | U *- *1 | 0.00198 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:16 | 1 |
| Xylenes, Total | <0.00396 | U | 0.00396 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *127* | | *70 - 130* | *06/05/23 09:33* | *06/05/23 18:16* | *1* |
| *1,4-Difluorobenzene (Surr)* | *91* | | *70 - 130* | *06/05/23 09:33* | *06/05/23 18:16* | *1* |

### Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00396 | U | 0.00396 | | mg/Kg | | | 06/06/23 12:06 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total TPH | <49.9 | U | 49.9 | | mg/Kg | | | 06/05/23 11:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <49.9 | U | 49.9 | | mg/Kg | | 06/02/23 09:01 | 06/02/23 17:05 | 1 |
| Diesel Range Organics (Over C10-C28) | <49.9 | U | 49.9 | | mg/Kg | | 06/02/23 09:01 | 06/02/23 17:05 | 1 |
| OII Range Organics (Over C28-C36) | <49.9 | U | 49.9 | | mg/Kg | | 06/02/23 09:01 | 06/02/23 17:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *133* | *S1+* | *70 - 130* | *06/02/23 09:01* | *06/02/23 17:05* | *1* |
| *o-Terphenyl (Surr)* | *99* | | *70 - 130* | *06/02/23 09:01* | *06/02/23 17:05* | *1* |

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **261** | | 4.98 | | mg/Kg | | | 06/04/23 20:54 | 1 |

## Client Sample ID: C-6, 0-1'

**Date Collected: 05/31/23 12:05**
**Date Received: 06/01/23 15:13**

**Lab Sample ID: 880-29009-2**
**Matrix: Solid**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | U *+ | 0.00202 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:42 | 1 |
| Toluene | <0.00202 | U *+ | 0.00202 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:42 | 1 |
| Ethylbenzene | <0.00202 | U *+ | 0.00202 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:42 | 1 |
| m,p-Xylenes | <0.00404 | U | 0.00404 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:42 | 1 |
| o-Xylene | <0.00202 | U *- *1 | 0.00202 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:42 | 1 |
| Xylenes, Total | <0.00404 | U | 0.00404 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 18:42 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *125* | | *70 - 130* | *06/05/23 09:33* | *06/05/23 18:42* | *1* |
| *1,4-Difluorobenzene (Surr)* | *90* | | *70 - 130* | *06/05/23 09:33* | *06/05/23 18:42* | *1* |

# Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Job ID: 880-29009-1
SDG: 22-0105-09

**Client Sample ID: C-6, 0-1'**
**Date Collected: 05/31/23 12:05**
**Date Received: 06/01/23 15:13**

**Lab Sample ID: 880-29009-2**
**Matrix: Solid**

## Method: TAL SOP Total BTEX - Total BTEX Calculation

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total BTEX | <0.00404 | U | 0.00404 | | mg/Kg | | | 06/06/23 12:06 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total TPH** | **444** | | 50.0 | | mg/Kg | | | 06/05/23 11:22 | 1 |

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | <50.0 | U | 50.0 | | mg/Kg | | 06/02/23 09:01 | 06/02/23 17:26 | 1 |
| **Diesel Range Organics (Over C10-C28)** | **444** | | 50.0 | | mg/Kg | | 06/02/23 09:01 | 06/02/23 17:26 | 1 |
| OII Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 06/02/23 09:01 | 06/02/23 17:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *140* | *S1+* | *70 - 130* | *06/02/23 09:01* | *06/02/23 17:26* | *1* |
| *o-Terphenyl (Surr)* | *106* | | *70 - 130* | *06/02/23 09:01* | *06/02/23 17:26* | *1* |

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **7070** | | 50.2 | | mg/Kg | | | 06/04/23 21:10 | 10 |

# Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Job ID: 880-29009-1
SDG: 22-0105-09

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | BFB1 | DFBZ1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-29009-1 | C-5, 1' | 127 | 91 |
| 880-29009-2 | C-6, 0-1' | 125 | 90 |
| LCS 880-54723/1-A | Lab Control Sample | 114 | 104 |
| LCSD 880-54723/2-A | Lab Control Sample Dup | 119 | 100 |
| MB 880-54723/5-A | Method Blank | 69 S1- | 89 |

**Surrogate Legend**

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

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

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

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | 1CO1 | OTPH1 |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) |
| 880-29009-1 | C-5, 1' | 133 S1+ | 99 |
| 880-29009-2 | C-6, 0-1' | 140 S1+ | 106 |
| LCS 880-54621/2-A | Lab Control Sample | 111 | 86 |
| LCSD 880-54621/3-A | Lab Control Sample Dup | 121 | 93 |
| MB 880-54621/1-A | Method Blank | 158 S1+ | 125 |

**Surrogate Legend**

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Job ID: 880-29009-1
SDG: 22-0105-09

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

**Lab Sample ID: MB 880-54723/5-A**
**Matrix: Solid**
**Analysis Batch: 54717**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 54723**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 11:35 | 1 |
| Toluene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 11:35 | 1 |
| Ethylbenzene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 11:35 | 1 |
| m,p-Xylenes | <0.00400 | U | 0.00400 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 11:35 | 1 |
| o-Xylene | <0.00200 | U | 0.00200 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 11:35 | 1 |
| Xylenes, Total | <0.00400 | U | 0.00400 | | mg/Kg | | 06/05/23 09:33 | 06/05/23 11:35 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *69* | *S1-* | *70 - 130* | *06/05/23 09:33* | *06/05/23 11:35* | *1* |
| *1,4-Difluorobenzene (Surr)* | *89* | | *70 - 130* | *06/05/23 09:33* | *06/05/23 11:35* | *1* |

**Lab Sample ID: LCS 880-54723/1-A**
**Matrix: Solid**
**Analysis Batch: 54717**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 54723**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1383 | *+ | mg/Kg | | 138 | 70 - 130 | | |
| Toluene | | | 0.100 | 0.1216 | | mg/Kg | | 122 | 70 - 130 | | |
| Ethylbenzene | | | 0.100 | 0.1204 | | mg/Kg | | 120 | 70 - 130 | | |
| m,p-Xylenes | | | 0.200 | 0.2357 | | mg/Kg | | 118 | 70 - 130 | | |
| o-Xylene | | | 0.100 | 0.1144 | | mg/Kg | | 114 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *104* | | *70 - 130* |

**Lab Sample ID: LCSD 880-54723/2-A**
**Matrix: Solid**
**Analysis Batch: 54717**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 54723**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.100 | 0.1489 | *+ | mg/Kg | | 149 | 70 - 130 | 7 | 35 |
| Toluene | | | 0.100 | 0.1349 | *+ | mg/Kg | | 135 | 70 - 130 | 10 | 35 |
| Ethylbenzene | | | 0.100 | 0.1324 | *+ | mg/Kg | | 132 | 70 - 130 | 9 | 35 |
| m,p-Xylenes | | | 0.200 | 0.2585 | | mg/Kg | | 129 | 70 - 130 | 9 | 35 |
| o-Xylene | | | 0.100 | 0.01276 | *- *1 | mg/Kg | | 13 | 70 - 130 | 160 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *119* | | *70 - 130* |
| *1,4-Difluorobenzene (Surr)* | *100* | | *70 - 130* |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Job ID: 880-29009-1
SDG: 22-0105-09

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

**Lab Sample ID: MB 880-54621/1-A**
**Matrix: Solid**
**Analysis Batch: 54612**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 54621**

| 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 | | 06/02/23 08:00 | 06/02/23 08:29 | 1 |
| Diesel Range Organics (Over C10-C28) | <50.0 | U | 50.0 | | mg/Kg | | 06/02/23 08:00 | 06/02/23 08:29 | 1 |
| Oil Range Organics (Over C28-C36) | <50.0 | U | 50.0 | | mg/Kg | | 06/02/23 08:00 | 06/02/23 08:29 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1-Chlorooctane (Surr)* | *158* | *S1+* | *70 - 130* | *06/02/23 08:00* | *06/02/23 08:29* | *1* |
| *o-Terphenyl (Surr)* | *125* | | *70 - 130* | *06/02/23 08:00* | *06/02/23 08:29* | *1* |

**Lab Sample ID: LCS 880-54621/2-A**
**Matrix: Solid**
**Analysis Batch: 54612**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 54621**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 924.6 | | mg/Kg | | 92 | 70 - 130 | | |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 938.7 | | mg/Kg | | 94 | 70 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *111* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *86* | | *70 - 130* |

**Lab Sample ID: LCSD 880-54621/3-A**
**Matrix: Solid**
**Analysis Batch: 54612**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 54621**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO)-C6-C10 | | | 1000 | 987.6 | | mg/Kg | | 99 | 70 - 130 | 7 | 20 |
| Diesel Range Organics (Over C10-C28) | | | 1000 | 1030 | | mg/Kg | | 103 | 70 - 130 | 9 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1-Chlorooctane (Surr)* | *121* | | *70 - 130* |
| *o-Terphenyl (Surr)* | *93* | | *70 - 130* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-54598/1-A**
**Matrix: Solid**
**Analysis Batch: 54655**

**Client Sample ID: Method Blank**
**Prep Type: Soluble**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | U | 5.00 | | mg/Kg | | | 06/04/23 19:23 | 1 |

# QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Job ID: 880-29009-1
SDG: 22-0105-09

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 880-54598/2-A**
**Matrix: Solid**
**Analysis Batch: 54655**

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

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

**Lab Sample ID: LCSD 880-54598/3-A**
**Matrix: Solid**
**Analysis Batch: 54655**

**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 | 250.9 | | mg/Kg | | 100 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 880-29009-1 MS**
**Matrix: Solid**
**Analysis Batch: 54655**

**Client Sample ID: C-5, 1'**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 261 | | 249 | 495.3 | | mg/Kg | | 94 | 90 - 110 | | |

**Lab Sample ID: 880-29009-1 MSD**
**Matrix: Solid**
**Analysis Batch: 54655**

**Client Sample ID: C-5, 1'**
**Prep Type: Soluble**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 261 | | 249 | 495.5 | | mg/Kg | | 94 | 90 - 110 | 0 | 20 |

# QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Job ID: 880-29009-1
SDG: 22-0105-09

## GC VOA

### Analysis Batch: 54717

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-29009-1 | C-5, 1' | Total/NA | Solid | 8021B | 54723 |
| 880-29009-2 | C-6, 0-1' | Total/NA | Solid | 8021B | 54723 |
| MB 880-54723/5-A | Method Blank | Total/NA | Solid | 8021B | 54723 |
| LCS 880-54723/1-A | Lab Control Sample | Total/NA | Solid | 8021B | 54723 |
| LCSD 880-54723/2-A | Lab Control Sample Dup | Total/NA | Solid | 8021B | 54723 |

### Prep Batch: 54723

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-29009-1 | C-5, 1' | Total/NA | Solid | 5035 | |
| 880-29009-2 | C-6, 0-1' | Total/NA | Solid | 5035 | |
| MB 880-54723/5-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 880-54723/1-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| LCSD 880-54723/2-A | Lab Control Sample Dup | Total/NA | Solid | 5035 | |

### Analysis Batch: 54877

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-29009-1 | C-5, 1' | Total/NA | Solid | Total BTEX | |
| 880-29009-2 | C-6, 0-1' | Total/NA | Solid | Total BTEX | |

## GC Semi VOA

### Analysis Batch: 54612

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-29009-1 | C-5, 1' | Total/NA | Solid | 8015B NM | 54621 |
| 880-29009-2 | C-6, 0-1' | Total/NA | Solid | 8015B NM | 54621 |
| MB 880-54621/1-A | Method Blank | Total/NA | Solid | 8015B NM | 54621 |
| LCS 880-54621/2-A | Lab Control Sample | Total/NA | Solid | 8015B NM | 54621 |
| LCSD 880-54621/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B NM | 54621 |

### Prep Batch: 54621

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-29009-1 | C-5, 1' | Total/NA | Solid | 8015NM Prep | |
| 880-29009-2 | C-6, 0-1' | Total/NA | Solid | 8015NM Prep | |
| MB 880-54621/1-A | Method Blank | Total/NA | Solid | 8015NM Prep | |
| LCS 880-54621/2-A | Lab Control Sample | Total/NA | Solid | 8015NM Prep | |
| LCSD 880-54621/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015NM Prep | |

### Analysis Batch: 54744

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-29009-1 | C-5, 1' | Total/NA | Solid | 8015 NM | |
| 880-29009-2 | C-6, 0-1' | Total/NA | Solid | 8015 NM | |

## HPLC/IC

### Leach Batch: 54598

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-29009-1 | C-5, 1' | Soluble | Solid | DI Leach | |
| 880-29009-2 | C-6, 0-1' | Soluble | Solid | DI Leach | |
| MB 880-54598/1-A | Method Blank | Soluble | Solid | DI Leach | |
| LCS 880-54598/2-A | Lab Control Sample | Soluble | Solid | DI Leach | |
| LCSD 880-54598/3-A | Lab Control Sample Dup | Soluble | Solid | DI Leach | |
| 880-29009-1 MS | C-5, 1' | Soluble | Solid | DI Leach | |

# QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-29009-1
Project/Site: SD 19 CTB PW Release SDG: 22-0105-09

## HPLC/IC (Continued)

### Leach Batch: 54598 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-29009-1 MSD | C-5, 1' | Soluble | Solid | DI Leach | |

### Analysis Batch: 54655

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 880-29009-1 | C-5, 1' | Soluble | Solid | 300.0 | 54598 |
| 880-29009-2 | C-6, 0-1' | Soluble | Solid | 300.0 | 54598 |
| MB 880-54598/1-A | Method Blank | Soluble | Solid | 300.0 | 54598 |
| LCS 880-54598/2-A | Lab Control Sample | Soluble | Solid | 300.0 | 54598 |
| LCSD 880-54598/3-A | Lab Control Sample Dup | Soluble | Solid | 300.0 | 54598 |
| 880-29009-1 MS | C-5, 1' | Soluble | Solid | 300.0 | 54598 |
| 880-29009-1 MSD | C-5, 1' | Soluble | Solid | 300.0 | 54598 |

# Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Job ID: 880-29009-1
SDG: 22-0105-09

## Client Sample ID: C-5, 1'

**Date Collected: 05/31/23 12:00**
**Date Received: 06/01/23 15:13**

## Lab Sample ID: 880-29009-1

**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 | | | 5.05 g | 5 mL | 54723 | 06/05/23 09:33 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 54717 | 06/05/23 18:16 | AJ | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 54877 | 06/06/23 12:06 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 54744 | 06/05/23 11:22 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.02 g | 10 mL | 54621 | 06/02/23 09:01 | AM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 54612 | 06/02/23 17:05 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 5.02 g | 50 mL | 54598 | 06/01/23 16:19 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 1 | 50 mL | 50 mL | 54655 | 06/04/23 20:54 | CH | EET MID |

## Client Sample ID: C-6, 0-1'

**Date Collected: 05/31/23 12:05**
**Date Received: 06/01/23 15:13**

## Lab Sample ID: 880-29009-2

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 4.95 g | 5 mL | 54723 | 06/05/23 09:33 | EL | EET MID |
| Total/NA | Analysis | 8021B | | 1 | 5 mL | 5 mL | 54717 | 06/05/23 18:42 | AJ | EET MID |
| Total/NA | Analysis | Total BTEX | | 1 | | | 54877 | 06/06/23 12:06 | SM | EET MID |
| Total/NA | Analysis | 8015 NM | | 1 | | | 54744 | 06/05/23 11:22 | SM | EET MID |
| Total/NA | Prep | 8015NM Prep | | | 10.01 g | 10 mL | 54621 | 06/02/23 09:01 | AM | EET MID |
| Total/NA | Analysis | 8015B NM | | 1 | 1 uL | 1 uL | 54612 | 06/02/23 17:26 | SM | EET MID |
| Soluble | Leach | DI Leach | | | 4.98 g | 50 mL | 54598 | 06/01/23 16:19 | KS | EET MID |
| Soluble | Analysis | 300.0 | | 10 | 50 mL | 50 mL | 54655 | 06/04/23 21:10 | CH | EET MID |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-29009-1
Project/Site: SD 19 CTB PW Release SDG: 22-0105-09

## Laboratory: Eurofins Midland

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

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Texas | NELAP | T104704400-22-25 | 06-30-23 |

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

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

# Method Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Job ID: 880-29009-1
SDG: 22-0105-09

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

**Protocol References:**

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

# Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD 19 CTB PW Release

Job ID: 880-29009-1
SDG: 22-0105-09

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 880-29009-1 | C-5, 1' | Solid | 05/31/23 12:00 | 06/01/23 15:13 |
| 880-29009-2 | C-6, 0-1' | Solid | 05/31/23 12:05 | 06/01/23 15:13 |

Released to Imaging: 12/5/2023 1:12:27 PM
Received by OCD: 8/23/2023 10:40:52 AM

29009 No. 3080

# CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE 6/1/2023 PAGE 1 OF 1
PO# LAB WORK ORDER#
PROJECT LOCATION OR NAME SD 19 CTB PW Release
LAI PROJECT # 22-01055-09 COLLECTOR KG
Data Reported to Robert Nelson & Mark Larson

TRRP report? ☐ Yes ☑ No
TIME ZONE Time zone/State MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

| Field Sample I D | Lab # | Date | Time | Matrix | # of Containers | PRESERVATION HCl | $HNO_3$ | $H_2SO_4$ ☐ NaOH ☐ | ICE | UNPRESSERVED | ANALYSES BTEX ☐ MTBE ☐ | TRPH 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 ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ | TCLP VOC ☐ | TCLP - PEST ☐ | HERB ☐ | Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ | OTHER LIST ☐ | LEAD - TOTAL ☐ | D W 200.8 ☐ | TCLP ☐ | RCI ☐ | TOX ☐ | FLASHPOINT ☐ | TDS ☐ | TSS ☐ | % MOISTURE ☐ | pH ☐ | HEXAVALENT CHROMIUM ☐ | CYANIDE ☐ | EXPLOSIVES ☐ | PECHLORATE ☐ | CHLORIDE ☑ | ANIONS ☐ | ALKALINITY ☐ | FIELD NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C-5, 1' | | 5/31/23 | 1200 | S | 1 | | | | X | | X | | | X | X | X | | | | | | | | | | | | | | | | | | | | | | | | | X | | | 202 |
| C-6, 0-1' | | 1 | 1205 | 1 | 1 | | | | X | | X | | | X | X | X | | | | | | | | | | | | | | | | | | | | | | | | | X | | | |

TOTAL

RELINQUISHED BY (Signature) DATE/TIME 6/1/23 1513 RECEIVED BY (Signature)
RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature)
RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature)
LABORATORY Xenco

880-29009 Chain of Custody

**TURN AROUND TIME**
NORMAL ☑
1 DAY ☐
2 DAY ☐
OTHER ☐

**LABORATORY USE ONLY:**
RECEIVING TEMP 3.3/3.0 THERM# IR8 :30
CUSTODY SEALS - ☐ BROKEN ☑ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

# Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-29009-1
SDG Number: 22-0105-09

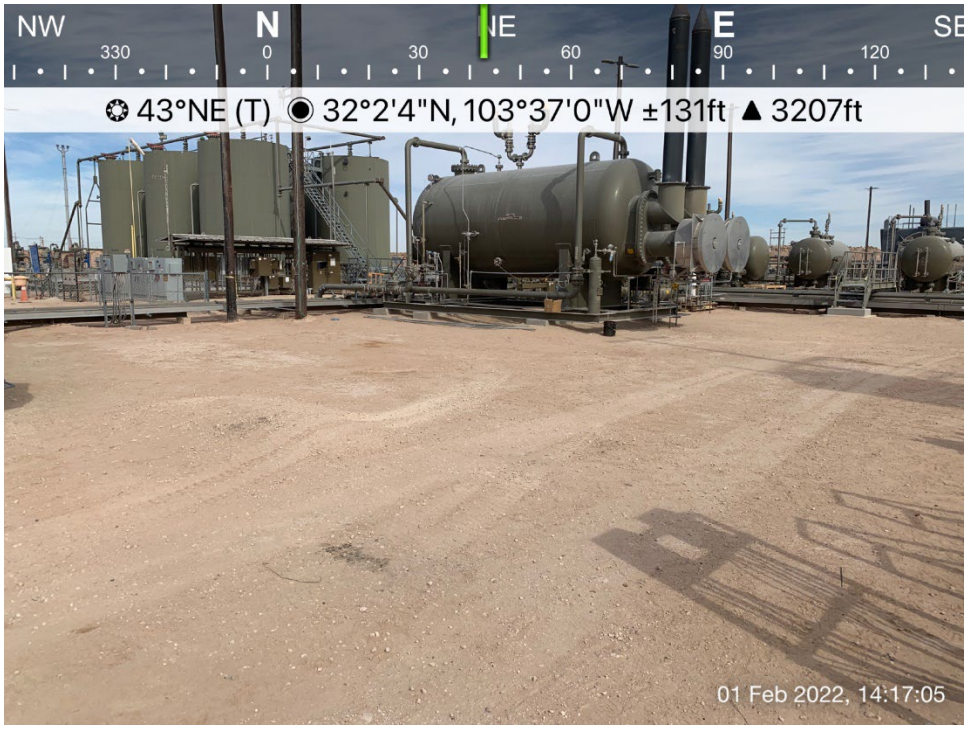
**Login Number: 29009**
**List Number: 1**
**Creator: Rodriguez, Leticia**

**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 F

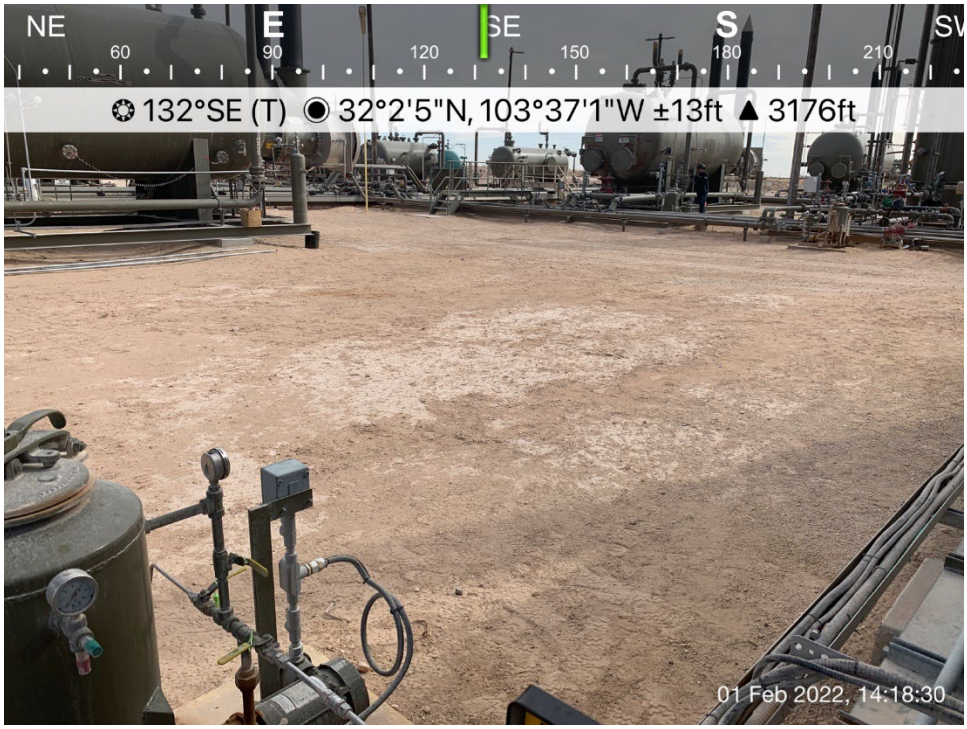
# Photographic Documentation



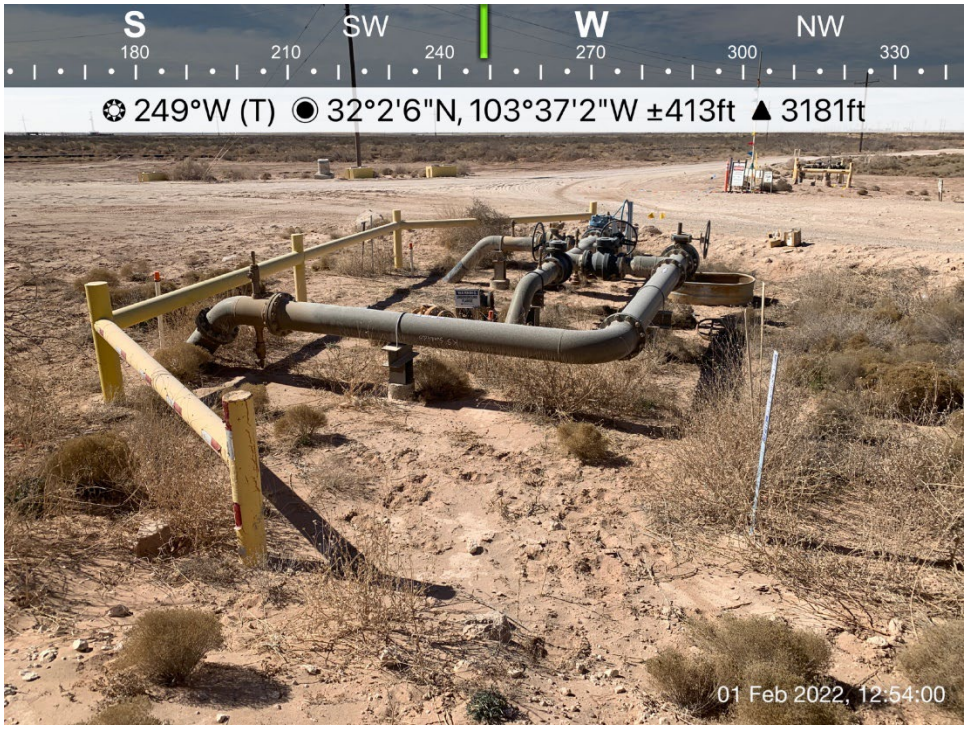

Waterline Release Impacted Area, Viewing Northeast

Waterline Release Impacted Area, Viewing North

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023




Waterline Release Impacted Area, Viewing Southeast




Manifold Release Impacted Area, Viewing West

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Manifold Release Impacted Area, Viewing East

Manifold Release Impacted Area, Viewing Northeast

Produced Water Release Impacted Area Viewing North, June 22, 2022

Produced Water Release Impacted Area Viewing Northeast, June 22, 2022

Produced Water Release Impacted Area Viewing North, June 22, 2022

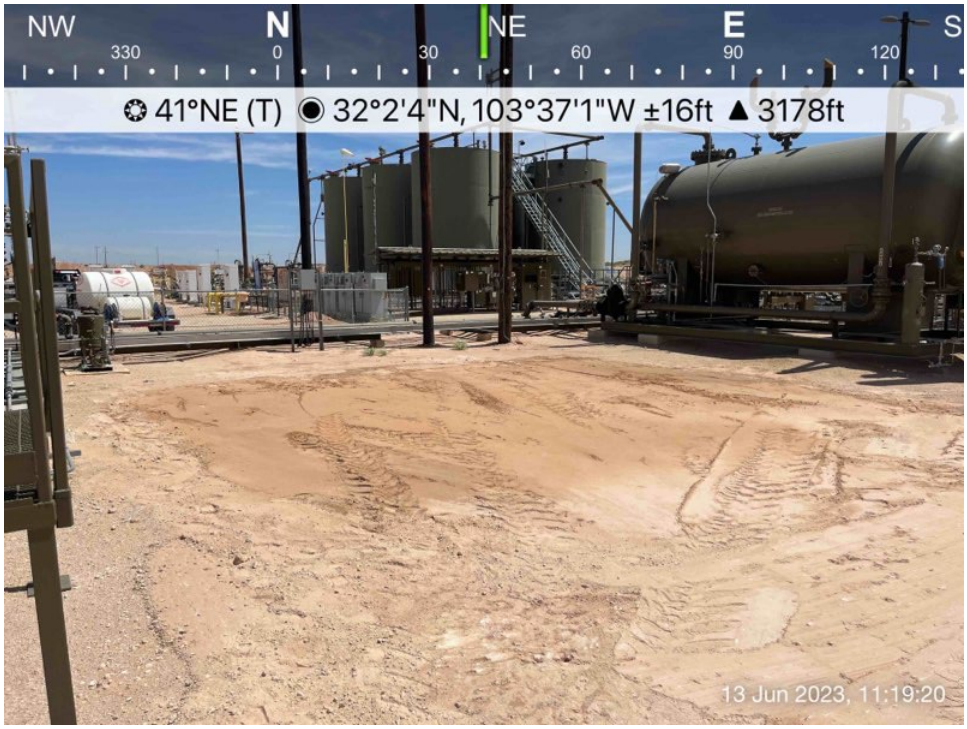
Produced Water Release Impacted Area Viewing East, June 22, 2022

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Waterline Excavated Area, June 13, 2023

Waterline Excavate Area, June 13, 2023

Waterline Excavated Area, June 13, 2023




Waterline Backfilled Area, June 13, 2023

Waterline Backfilled Area, June 13, 2023

Waterline Backfilled Area, June 13, 2023

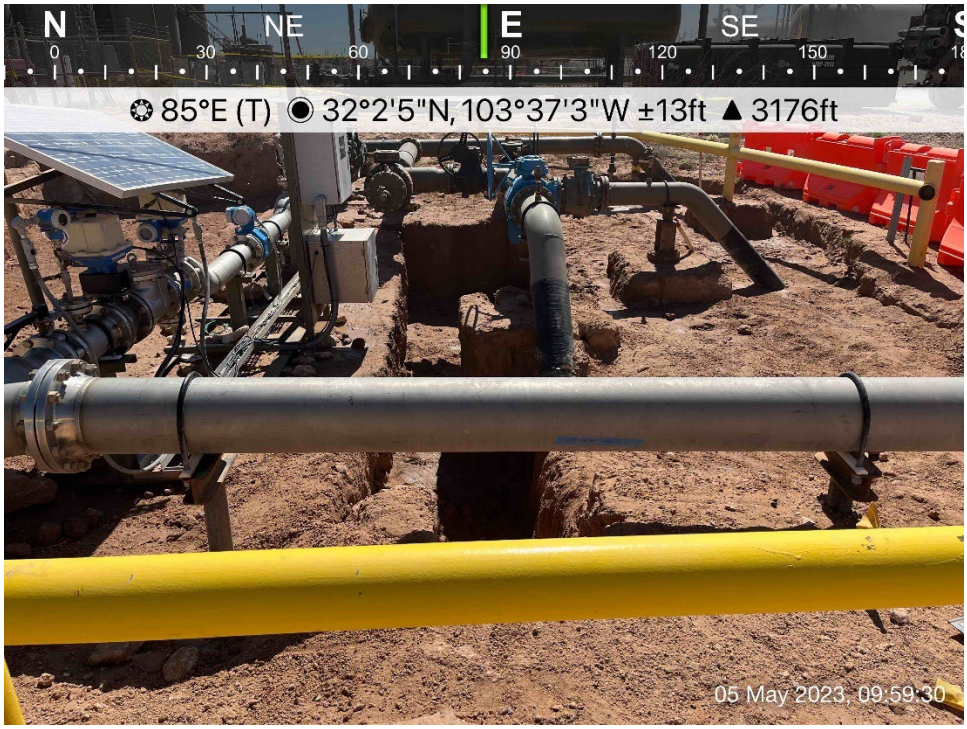
Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Manifold Initially Excavated Area, May 4, 2023

Manifold Initially Excavated Area, May 5, 2023

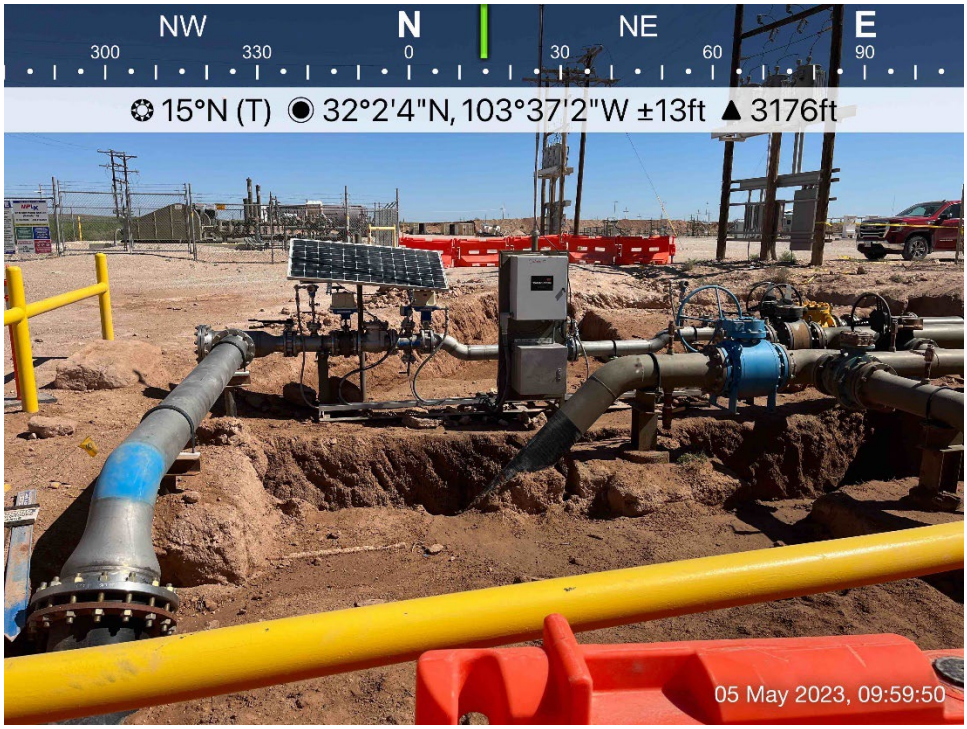
Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Manifold Initially Excavated Area, May 5, 2023

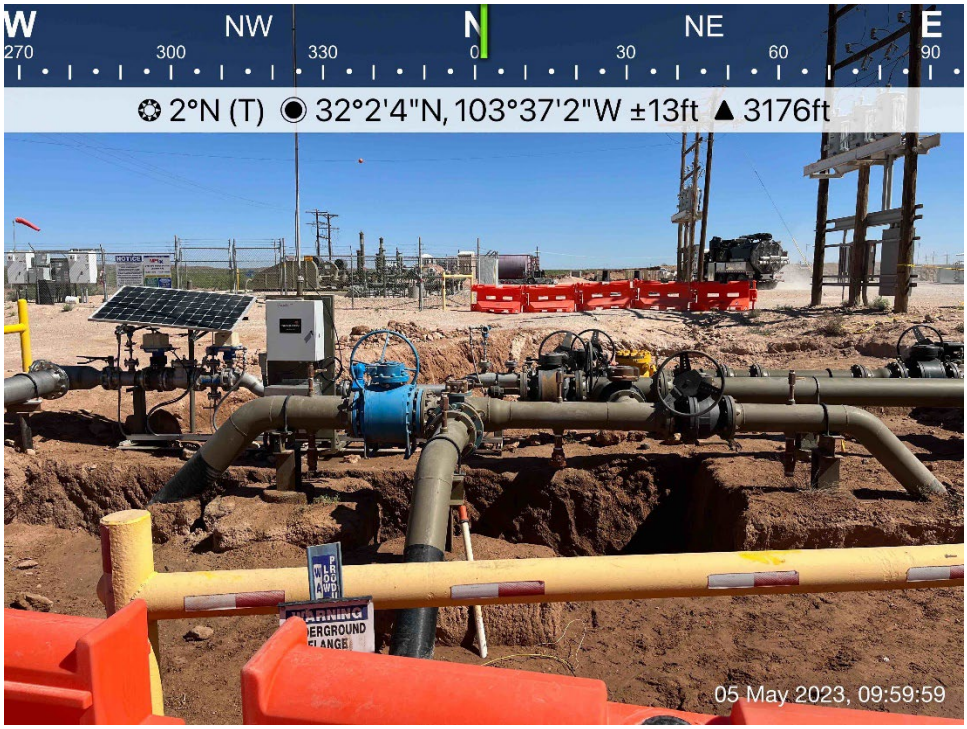



Manifold Initially Excavated Area, May 5, 2023

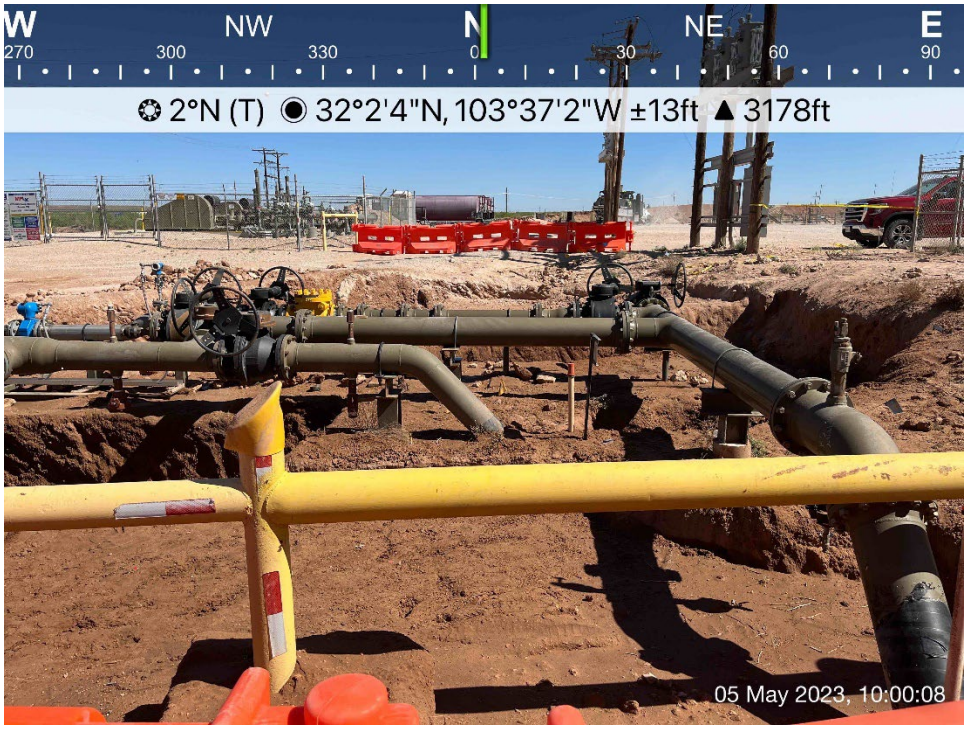
Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023



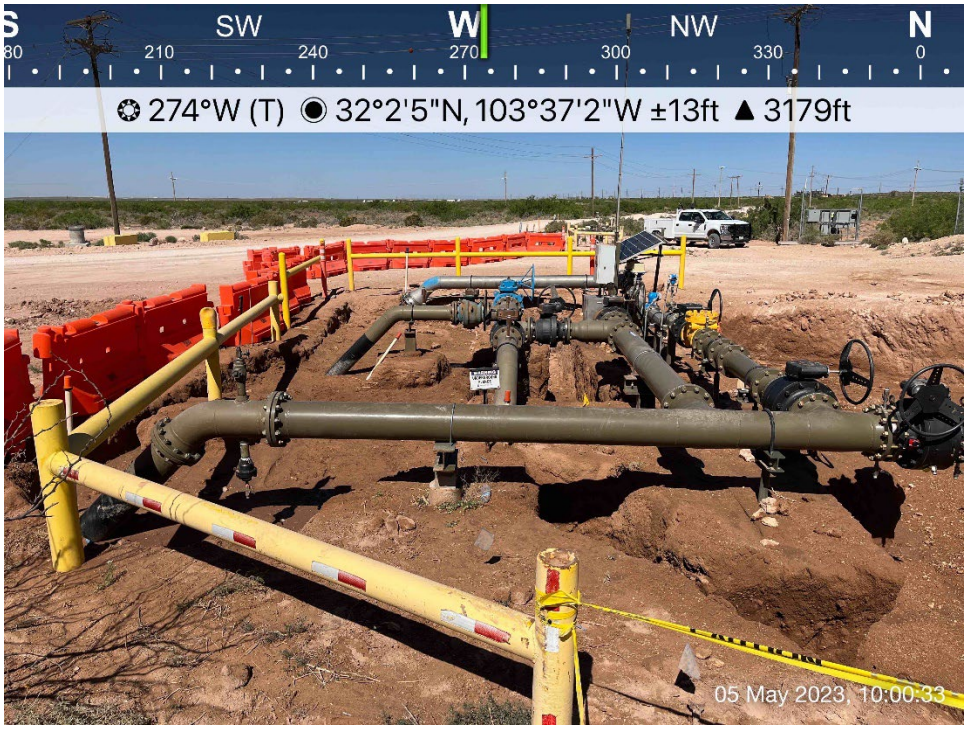

Manifold Initially Excavated Area, May 5, 2023




Manifold Initially Excavated Area, May 5, 2023




Manifold Initially Excavated Area, May 5, 2023



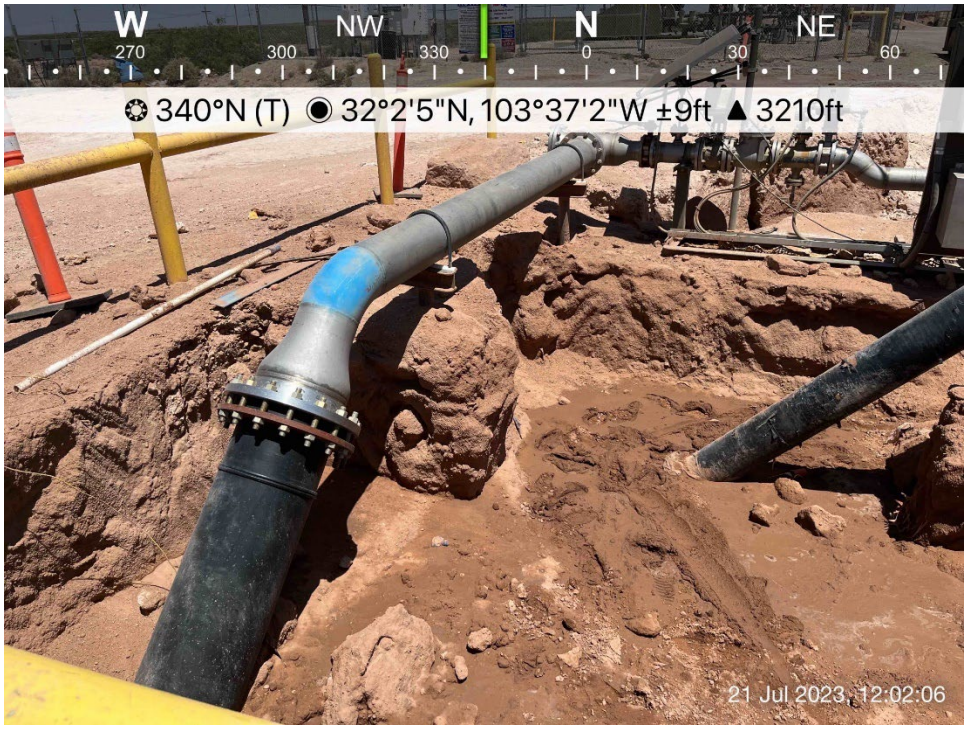

Manifold Initially Excavated Area, May 5, 2023

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Manifold Initially Excavated Area, May 5, 2023

Manifold Additionally Excavated Area, July 21, 2023

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023




Manifold Additionally Excavated Area, July 21, 2023

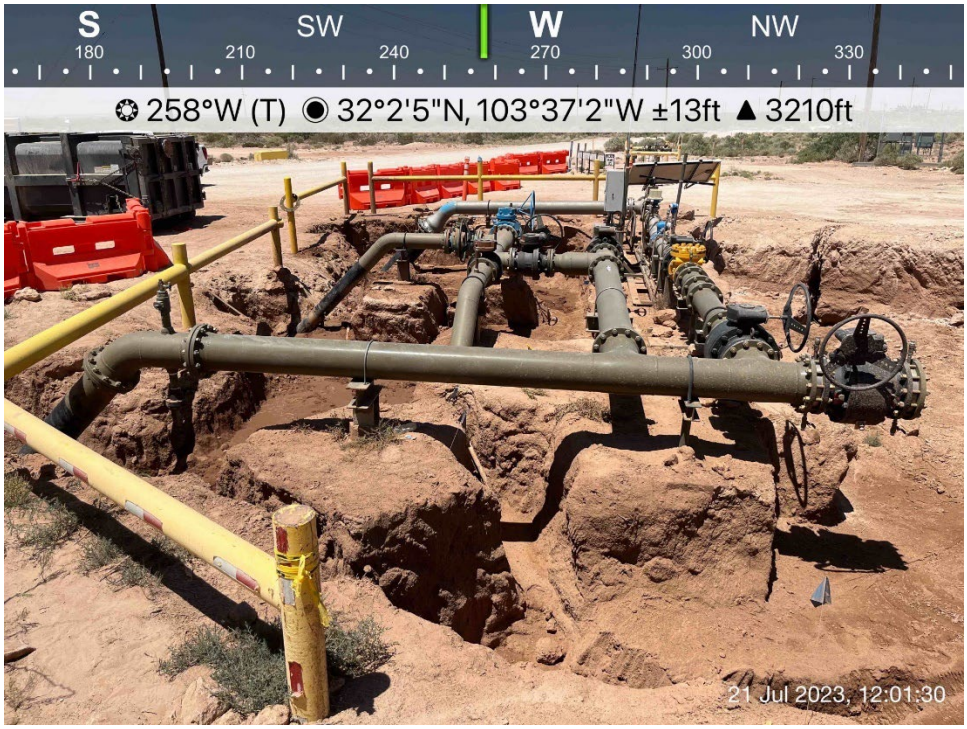
Manifold Additionally Excavated Area, July 21, 2023

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Manifold Additionally Excavated Area, July 21, 2023

Manifold Additionally Excavated Area, July 21, 2023

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023




Manifold Additionally Excavated Area, July 21, 2023

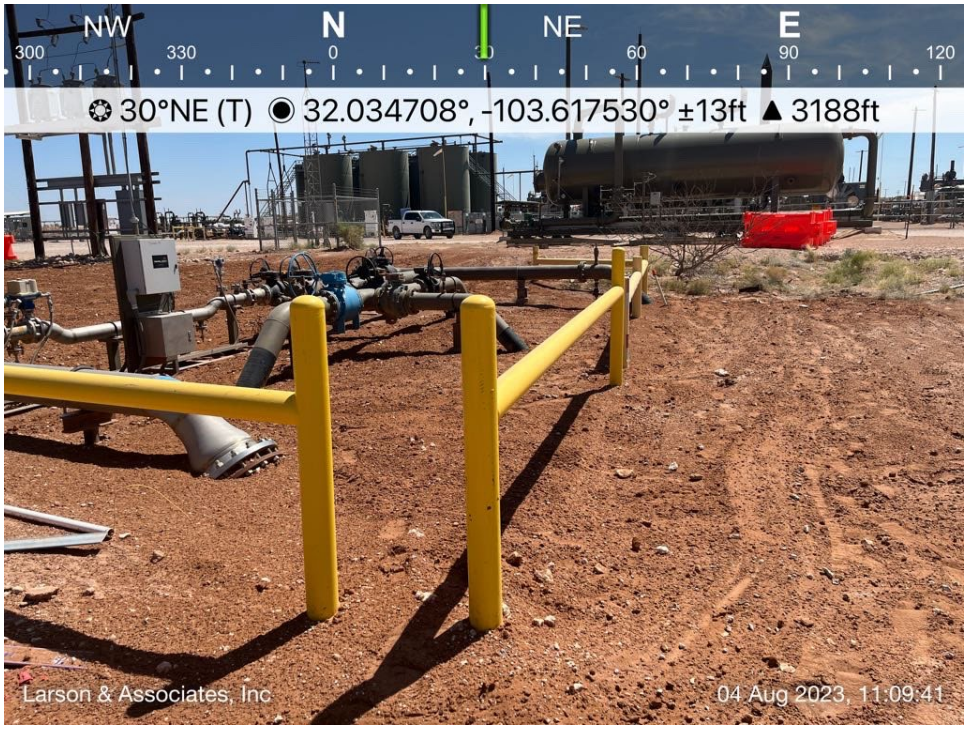
Manifold Additionally Excavated Area, July 21, 2023

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Manifold Additionally Excavated Area, July 21, 2023

Manifold Additionally Excavated Area, July 21, 2023

Manifold Additionally Excavated Area, July 21, 2023




Manifold Backfilled and Seeded Area, August 4, 2023

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Manifold Backfilled and Seeded Area, August 4, 2023

Manifold Backfilled and Seeded Area, August 4, 2023

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Manifold Backfilled and Seeded Area, August 4, 2023

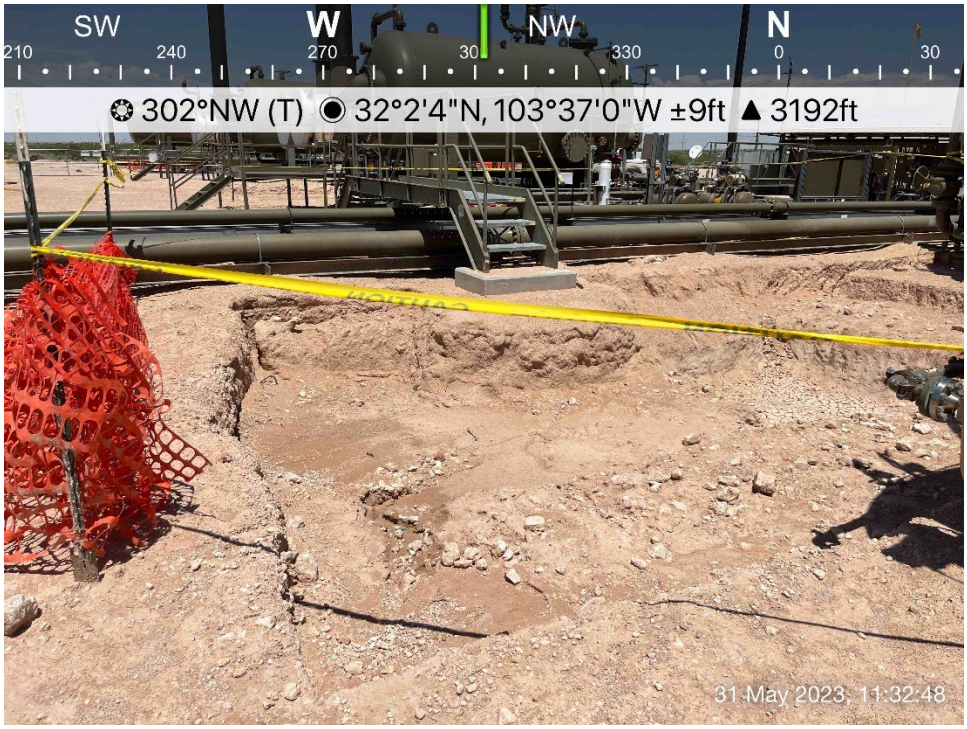
Manifold Backfilled and Seeded Area, August 4, 2023

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Manifold Backfilled and Seeded Area, August 4, 2023

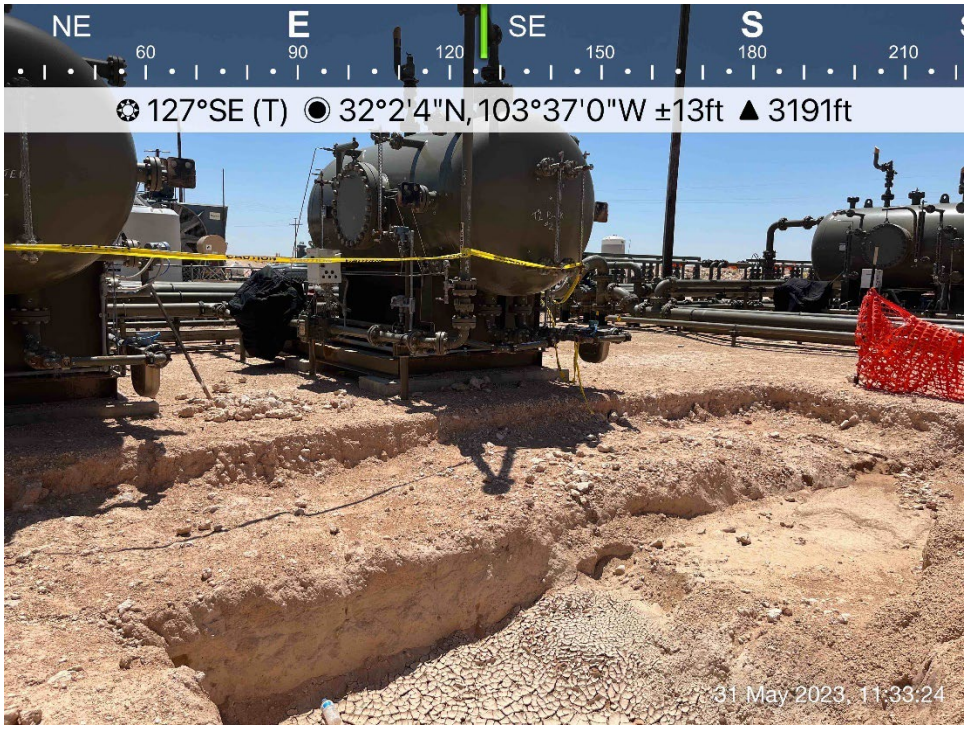
Produced Water Release Excavated Area, May 31, 2023

Produced Water Release Excavated Area, May 31, 2023




Produced Water Release Excavated Area, May 31, 2023

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023




Produced Water Release Excavated Area, May 31, 2023

Produced Water Release Excavated Area, May 31, 2023

Produced Water Release Backfilled Area, June 14, 2023

Produced Water Release Backfilled Area, June 14, 2023

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Produced Water Release Backfilled Area, June 14, 2023

Produced Water Release Backfilled Area, June 14, 2023

Tracking Numbers: nAPP2123134861, nAPP2201046595, and nAPP2216545859
Closure Report
Salado Draw 19 CTB, Chevron USA Inc.
Crude Oil and/or Produced Water Releases
August 10, 2023

Produced Water Release Backfilled Area, June 14, 2023

**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
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**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 255893

## CONDITIONS

| | |
|---|---|
| Operator:<br>CHEVRON U S A INC<br>6301 Deauville Blvd<br>Midland, TX 79706 | OGRID:<br>4323 |
| | Action Number:<br>255893 |
| | Action Type:<br>[C-141] Release Corrective Action (C-141) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| nvelez | Remediation closure reflected for incident # nAPP2123134861 only. Closure report approved, release resolved. | 12/5/2023 |