July 14, 2021

NMOCD Environmental Bureau
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Remediation Plan
Apache Corporation
NMGSAU 1416
nAPP2112649963

RXSoil, Inc. is pleased to submit the remediation plan for the on-site remediation of impacted soil for the above release in New Mexico.

Sincerely,

Jace Caraway
Chief Operating Officer
RXSoil, Inc.
(940) 210-2051

Zach Robbins
Technical and Engineering Analyst
RXSoil, Inc.
(210) 400-7645

Table of Contents

Figures

Appendix

I. Introduction

On behalf of Apache Corporation ("Apache"), RXSoil, Inc. ("RXSoil") has prepared this work plan that describes remediation of the release of produced water and crude oil at the NMGSAU 1416.

The release was discovered on 3/25/2021 in Unit Letter J, Section 36, Township 19S, Range 36E (see *Figure 1* for Vicinity Map) at approximate coordinates 32.61429, -103.30418. It was reported that an unknown amount of crude oil produced water was released. The C-141 is given as *Appendix A*.

II. Site Assessment/Characterization

1. **Site Map** – See *Figure 2*
2. **Depth to ground water** – Remediation standards for <50 feet will be used on this remediation project, based on the borings described in *Appendix B* that encountered groundwater at 35.3 feet BGS.
3. **Wellhead protection area** – There are no known wellheads in the area.
4. **Distance to nearest significant watercourse** – There is no significant watercourse within a half-mile of any horizontal boundary of the release (see *Figure 3*).
5. **Soil/waste characteristics** – Soil samples were collected from five (5) borehole locations. Samples from location "Source" and "SP4" tested above Table 1 thresholds at deepest depths of 30' BGS and 5' BGS, respectively. Full report of soil characteristics can be seen in *Appendix B* "Administrative Summary and Path Forward for NMGSAU #1416, Lea County, New Mexico".

III. Remediation Plan

Due to a buried 20" active gas line running through the area of interest, a full excavation would pose a significant safety risk. RXSoil is proposing a treatment using RXBiotics, RXSoil's naturally occurring, non-genetically modified bioremediation agent to greatly reduce the hydrocarbon concentration in the described affected areas without the need to destabilize the 20" active gas line.

Using the investigative report from Larson & Associates, Inc., the "source" and SP-4 locations were identified as contaminated. "Source" had contamination to a depth of 30' BGS and SP-4 had contamination to a depth of 5' BGS. SP-1 through SP-3 tested below threshold for all contaminants. RXSoil is assuming that each contaminated sample point has impacted soils that will be treated within a radius of 15' from the two contaminated sample points.

Under proper approvals from the pipeline owners, RXSoil will drill a grid of six borings to the depth of contamination stated above for each contaminated area. Slotted or mesh-screen well casings will be installed and stabilized in each hole. A delivery system will be installed within the casing. A solution of RXBiotics, RXSoil's naturally occurring, non-genetically modified blend of bioremediation microbes, will be used to reduce the total petroleum hydrocarbon (TPH) levels in the soil.

Following treatment, all infrastructure will be removed, and the borings will be backfilled per regulatory requirements.

Approximately 90 days following treatment, samples will be collected. RXSoil is proposing collecting remediation samples that represent no more than 100 cubic yards of soil. For example, the volume of soil in a circle with radius of 15' and depth of 30' holds approximately 800 cubic yards. Two evenly-spaced boring locations would be selected and samples would be taken at surface, 10', 20' and 30' depths for a total of eight (8) samples for 800 cubic yards. All tools are to be decontaminated before each sample, as specified in *Field Equipment Cleaning and Decontamination* (EPA, 2015). This includes wiping the equipment clean, water-rinsing the equipment, washing the equipment in detergent and water, and rinsing the equipment in water.

Samples will temporarily be transferred to a new plastic bag in the field. Once in a location safer for handling glass, the samples will be transferred to glass jars, supplied by an approved laboratory. The threads on all jars will be wiped clean to allow an air-tight seal. Samples will be transferred on ice to a third-party laboratory to ensure tests are completed within an appropriate timeline.

Remediation efforts will commence following the approval of this remediation plan and are estimated to take approximately 90 days. It is estimated that 950 cubic yards will be remediated.

IV. Restoration, Reclamation and Re-Vegetation

Following remediation, in addition to actions described and performed by Larson & Associates, RXSoil will drill in seed to match native vegetation in any affected areas. A closure report will be submitted upon completion of this project.

Figure 1 - Vicinity Map

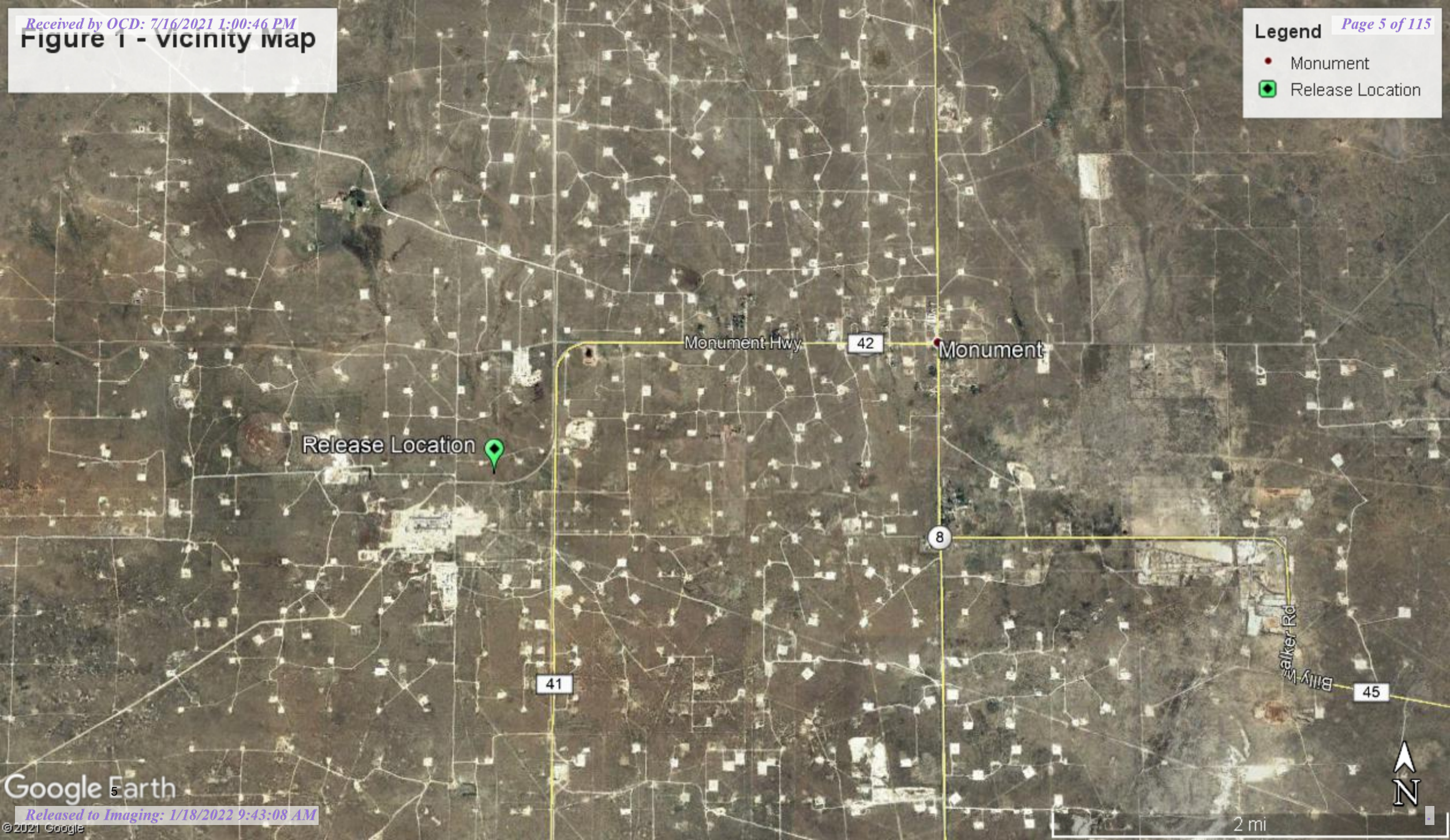


Figure 2 - Site Overview

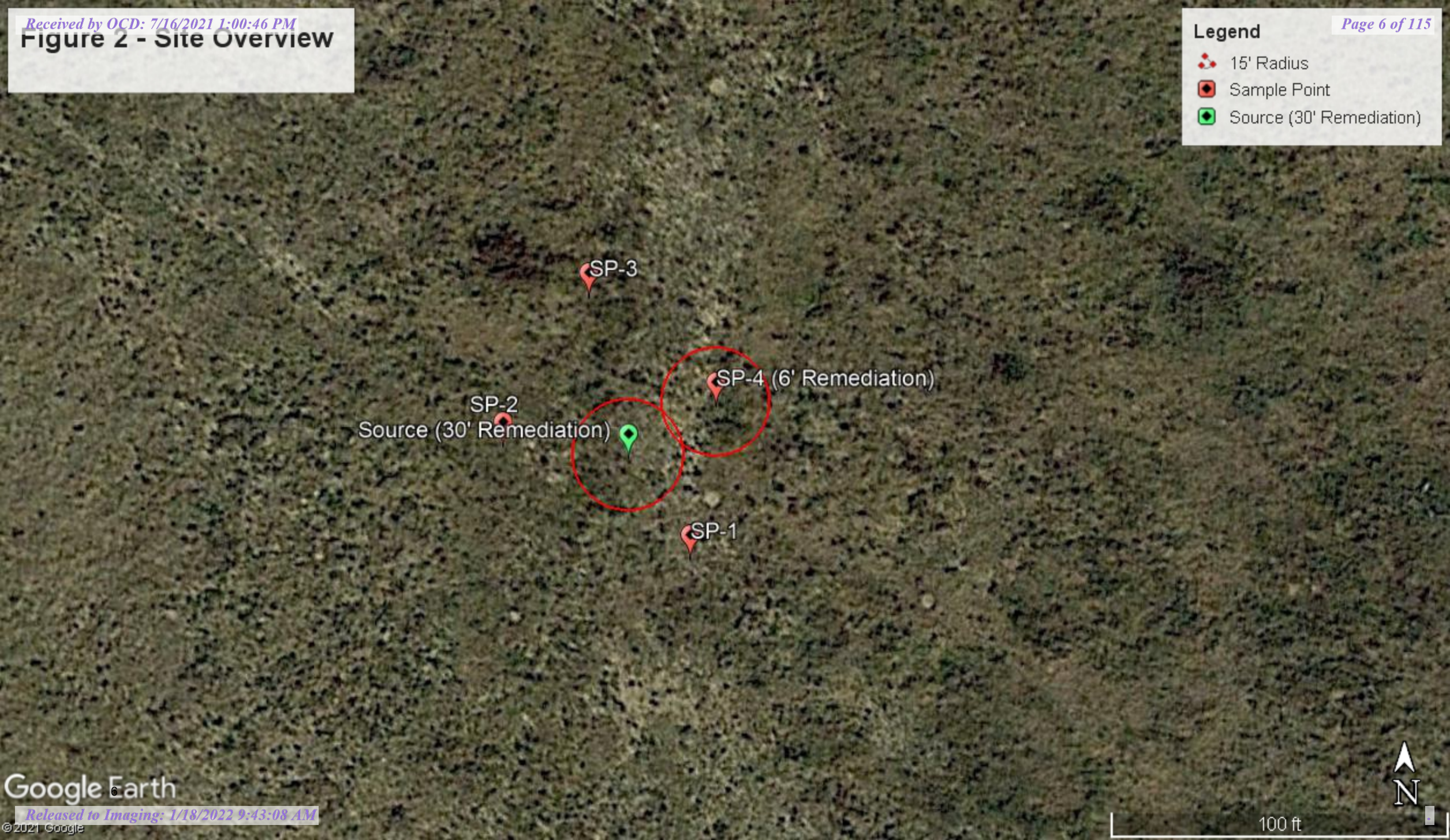
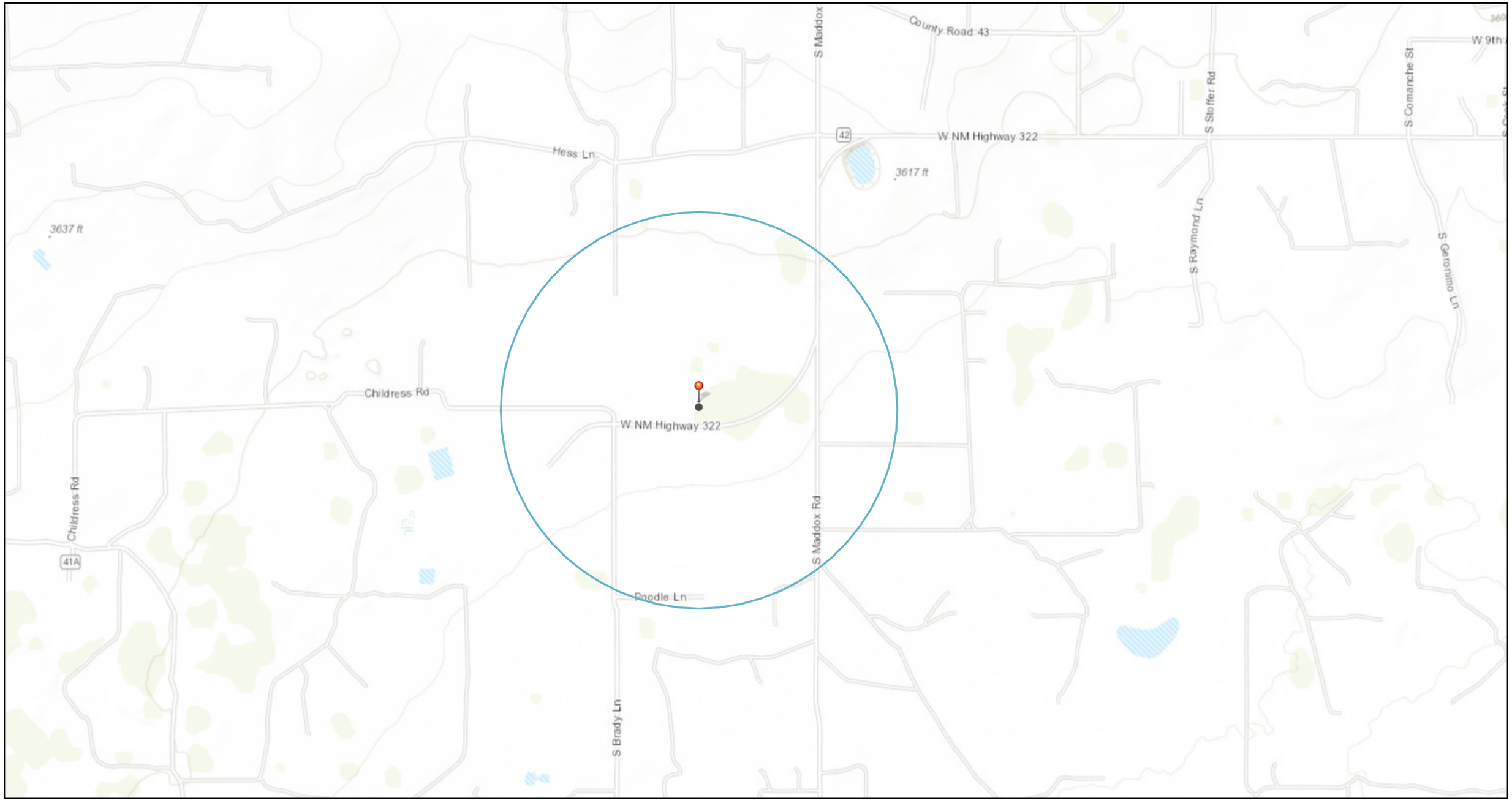


Figure 3 - Hydrology Map



7/14/2021, 3:03:26 PM

Override 1

Override 1

OCD District Offices

1:18,056

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, OCD

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

APPENDIX A

C-141

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2112649963
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	35.3 (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	nAPP2112649963
District RP	
Facility ID	
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: Larry Baker Title: Environmental Tech SR.

Signature: Larry Baker Date: 7/16/2021

email: larry.baker@apachecorp.com Telephone: 432-631-6982

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Larry Baker Title: Environmental Tech SR.

Signature: Larry Baker Date: 7/16/2021

email: larry.baker@apachecorp.com Telephone: 432-631-6982

OCD Only

Received by: Chad Hensley Date: 01/18/2022

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

Signature: Chad Hensley Date: 01/18/2022

APPENDIX B

LARSON & ASSOCIATES ADMINISTRATIVE SUMMARY

Larson & Associates, Inc.
Environmental Consultants

June 2, 2021

VIA EMAIL: Larry.Baker@apachecorp.com

Mr. Bruce Baker
Sr. Environmental Tecnician
Apache Corporation.
2350 W. Marland Blvd.
Hobbs, New Mexico

RE: Administrative Summary and Path Forward for NMGSAU #1416, Lea County, New Mexico

Dear Mr. Baker,

Larson & Associates, Inc. (LAI) submits this summary of the path forward to Apache Corporation (Apache) for monitor well installations and groundwater monitoring at the North Monument Grayburg San Andres Unit (NMGSAU) #1416 (Site) in Lea County, New Mexico.

Physical Setting

- The surface elevation is approximately 3,585 feet above mean sea level (msl).
- The topography slopes gently to southeast.
- No water features are located within 1,000 feet of the Site.
- Soil is designated as "Berino-Cacique fine sandy loams", consisting of 0 to 8 inches of fine sandy loam, underlain by 8 to 28 inches of sandy clay loam, and 28 – 38 inches of cemented material (caliche).
- The surface geology consists of Eolian and piedmont alluvial deposits (Holocene to lower Pleistocene).
- Groundwater occurs at approximately 35.3 feet below ground surface (bgs) based on depth to groundwater measured approximately 72 hours after installing a boring (SB-1) on May 28, 2021.

Figure 1 presents the topographic map. Figure 2 presents an aerial map.

Background

On May 24 and 25, 2021 Scarborough Drilling, Inc. (SDI), under the supervision of LAI, used an air rotary drilling rig to collect soil samples from five (5) locations, including SP-1 through SP-4 and at the Source for the release. Samples were collected from SP-1 through SP-4 at ground surface and at five-foot intervals (i.e., 5, 10, etc.) to 25 feet BGS. Samples at the Source were collected at approximately 14 feet bgs, and at five-foot intervals to approximately 30 feet bgs. An additional soil bore (SB-1) was drilled to 40 feet BGS

about 100 feet northwest from the Source to establish depth to groundwater (35.3 feet bgs). Attachment A presents SB-1 boring log.

Eurofins-Xenco (Xenco) Laboratory in Midland, Texas, analyzed the samples for benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C10), diesel range organic (<C10-C28), and oil range organics (<C28-C36), and chloride by EPA SW-846 Methods 8021B, 8015M, M300, respectfully. Table 1 presents the laboratory analytical summary. Attachment B presents the laboratory report.

The laboratory reported benzene, BTEX, TPH, and chloride concentrations in all samples from SP-1 through SP-3 below New Mexico Oil Conservation Division (OCD) closure criteria of 10 mg/Kg, 50 mg/Kg, 100 mg/KG, and 600 mg/Kg, respectfully. The following samples reported TPH concentrations above OCD closure criteria (100 mg/Kg):

Sample	Depth (feet)	TPH (mg/Kg)
SP-4	1	1,840
SP-4	5	122
Source	15	1,030
Source	20	511
Source	25	790
Source	30	662

The following samples were reported chloride concentrations above OCD closure criteria (600 mg/Kg):

Sample	Depth (feet)	Chloride (mg/Kg)
Source	15	618
Source	20	790
Source	25	788
Source	30	288

Path Forward

- Install three (3) groundwater monitoring wells to approximately 50 feet BGS. With one well located hydraulically upgradient (north-northwest) of the Source and two (2) wells hydraulically downgradient (south and southeast) from the Source.
- Complete monitoring wells with 30 feet of 2-inch schedule 40 PVC casing, 20 feet 0.010-inch slotted screen, and locking steel cover.
- Survey the monitoring wells for elevation (ground and top of casing) by New Mexico Licensed Professional Land Surveyor.
- Develop the monitoring wells. Collect depth to groundwater measurements, collect groundwater samples for laboratory analysis, and analyze for BTEX, TPH, chloride and total dissolved solids TDS.
- Prepare four (4) quarterly groundwater monitoring reports and one (1) annual groundwater monitoring report for submittal to the OCD.

Figure 3 presents the proposed monitoring well locations.

Fee

The cost of installing the monitoring wells, baseline and quarterly groundwater monitoring for 1 year is estimated to be approximately **$ 34,857.02.** Attachment C presents a detailed cost estimate.

AUTHORIZATION

If this proposal is acceptable to you, please sign below as notice to proceed and return one copy of this proposal intact to our office via email, mail or fax. We will proceed with scheduling dates to perform service upon receipt of proposal authorization.

Please contact me or Mark Larson if you have any questions, concerns or if we are approved to proceed.
Respectfully,

LARSON & ASSOCIATES, INC.

Mark J. Larson
President

Daniel St. Germain
Staff Geologist

Please call 432.687.0901 with any questions you may have, or if LAI can be of additional service. We look forward to working with you on this and future projects.

Encl

Authorization to Proceed

AGREED TO, THIS _____ DAY OF _____, 2021

BY (please print): _____

TITLE: _____

COMPANY: _____

SIGNATURE: _____

Tables

Table 1
Soil Sample Analytical Data Summary
NMGSAU 1416
Lea County, New Mexico
32° 36' 51.95" North, 103° 18' 15.68" West

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**100**	**600**
Source	15	5/24/2021	In-Situ	0.101	1.3	83.4	838.0	111.0	**1030.0**	**618.0**
	20	5/24/2021	In-Situ	0.338	3.48	<49.9	452.0	59.1	**511.0**	**790.0**
	25	5/24/2021	In-Situ	0.278	3.29	73.9	634.0	82.1	**790.0**	**788.0**
	30	5/25/2021	In-Situ	0.148	2.07	<49.9	590.0	72.2	**662.0**	288.0
S-1	1	5/24/2021	In-Situ	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	56.8
	5	5/24/2021	In-Situ	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	13.9
	10	5/24/2021	In-Situ	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	10.3
	15	5/24/2021	In-Situ	<0.00199	<0.00396	<49.9	<49.9	<49.9	<49.9	8.5
	20	5/24/2021	In-Situ	<0.00198	<0.00397	<49.8	<49.8	<49.8	<49.8	5.6
	25	5/24/2021	In-Situ	<0.00199	<0.00396	<49.9	<49.9	<49.9	<49.9	10.1
S-2	1	5/24/2021	In-Situ	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	12.9
	5	5/24/2021	In-Situ	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	5.8
	10	5/24/2021	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	10.3
	15	5/24/2021	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	5.1
	20	5/24/2021	In-Situ	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<4.98
	25	5/24/2021	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	5.6
S-3	1	5/24/2021	In-Situ	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	7.4
	5	5/24/2021	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	5.4
	10	5/24/2021	In-Situ	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	17.8
	15	5/24/2021	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	42.0
	20	5/24/2021	In-Situ	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	63.3
	25	5/24/2021	In-Situ	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	86.2

Table 1
Soil Sample Analytical Data Summary
NMGSAU 1416
Lea County, New Mexico
32° 36' 51.95" North, 103° 18' 15.68" West

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**100**	**600**
S-4	1	5/24/2021	In-Situ	<0.00202	<0.00403	<49.9	1840.0	<49.9	**1840.0**	224.0
	5	5/24/2021	In-Situ	<0.00199	<0.00398	<50.0	122.0	<50.0	**122.0**	50.4
	10	5/24/2021	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	24.8
	15	5/24/2021	In-Situ	<0.00198	<0.00397	<49.8	<49.8	<49.8	<49.8	31.7
	20	5/24/2021	In-Situ	<0.00198	<0.00397	<49.8	<49.8	<49.8	<49.8	54.6
	25	5/24/2021	In-Situ	0.00356	<0.00396	<49.9	<49.9	<49.9	<49.9	75.0

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

Figures

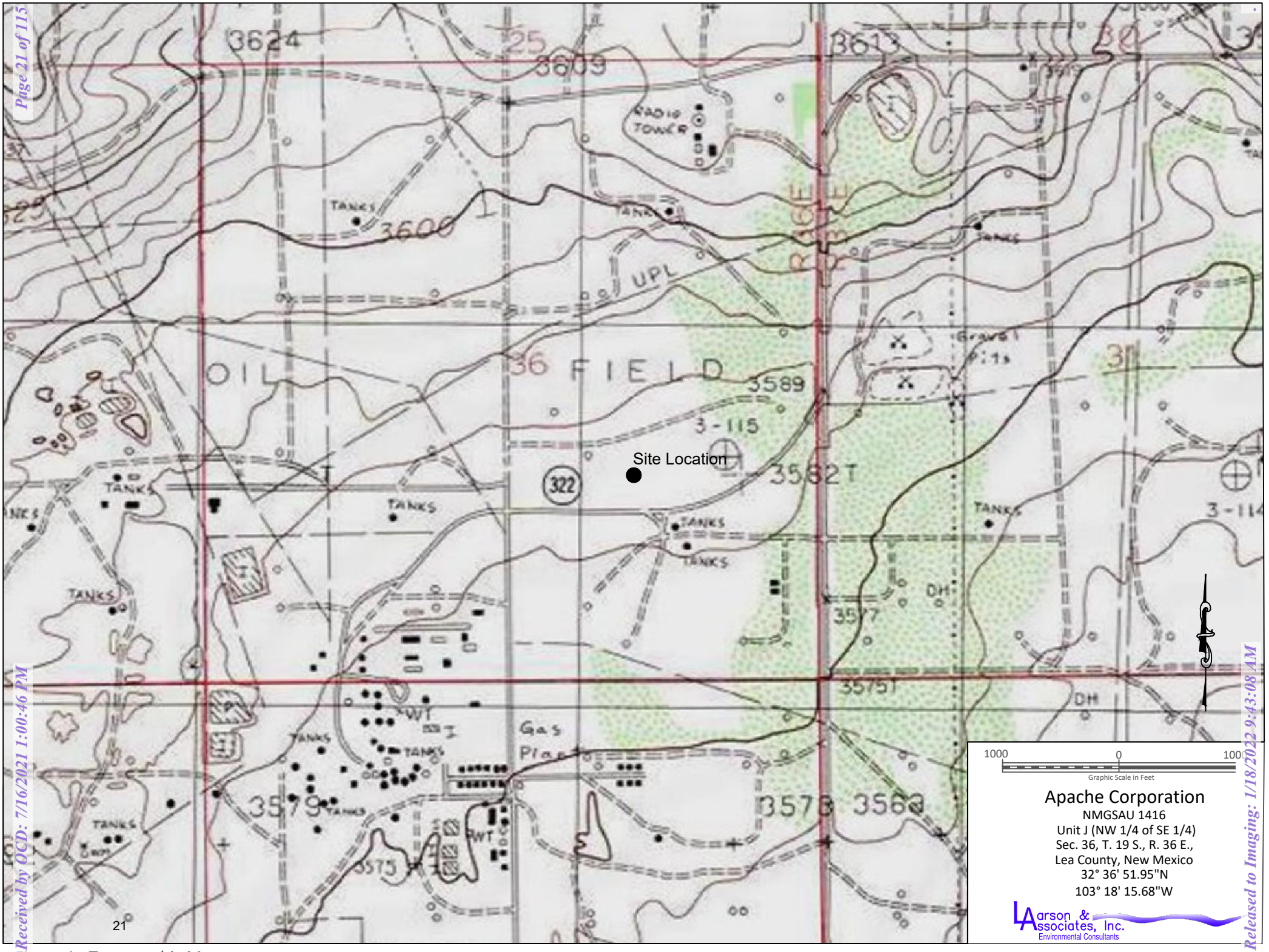


Figure 1 - Topographic Map

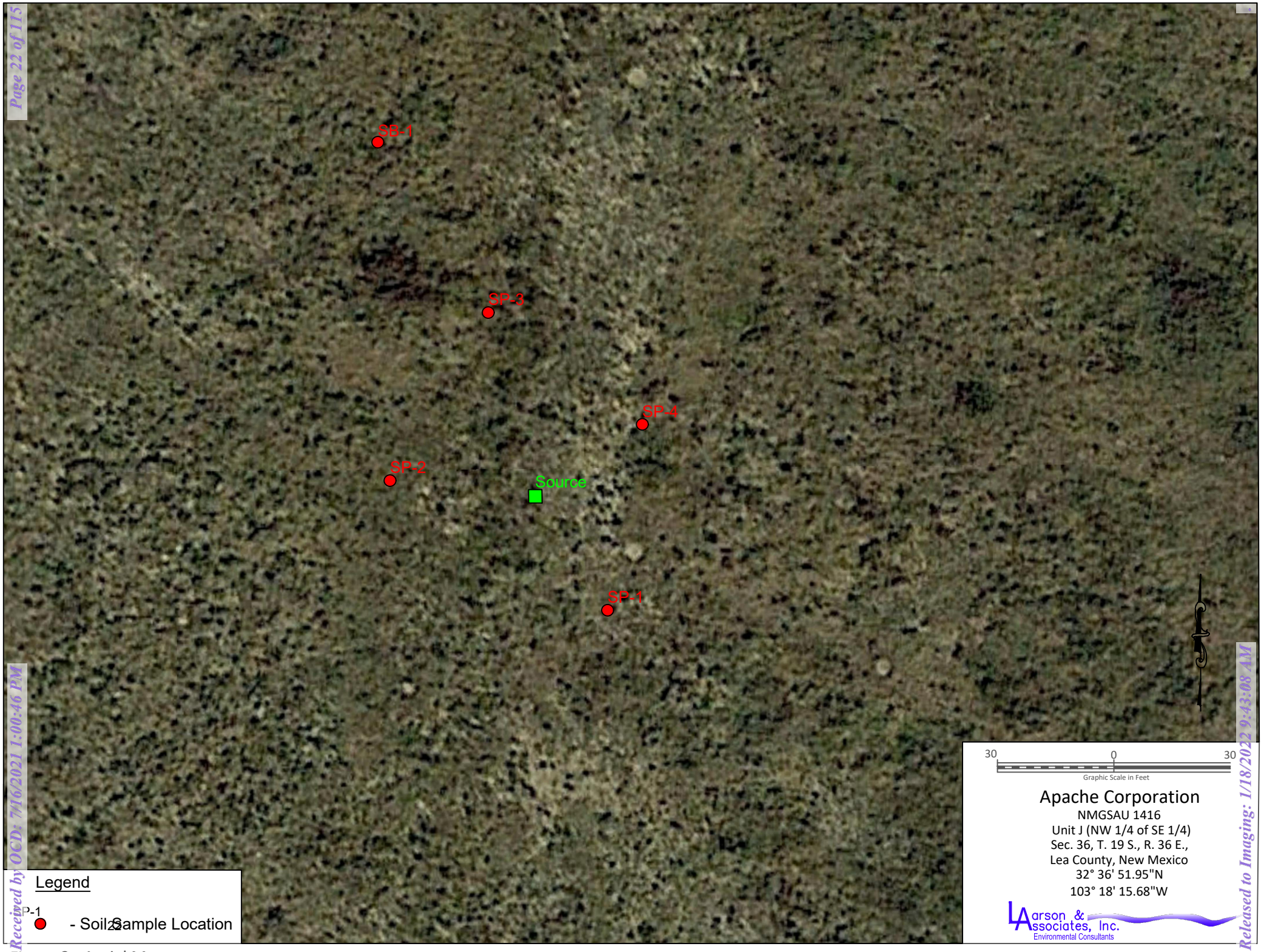


Figure 2 - Aerial Map

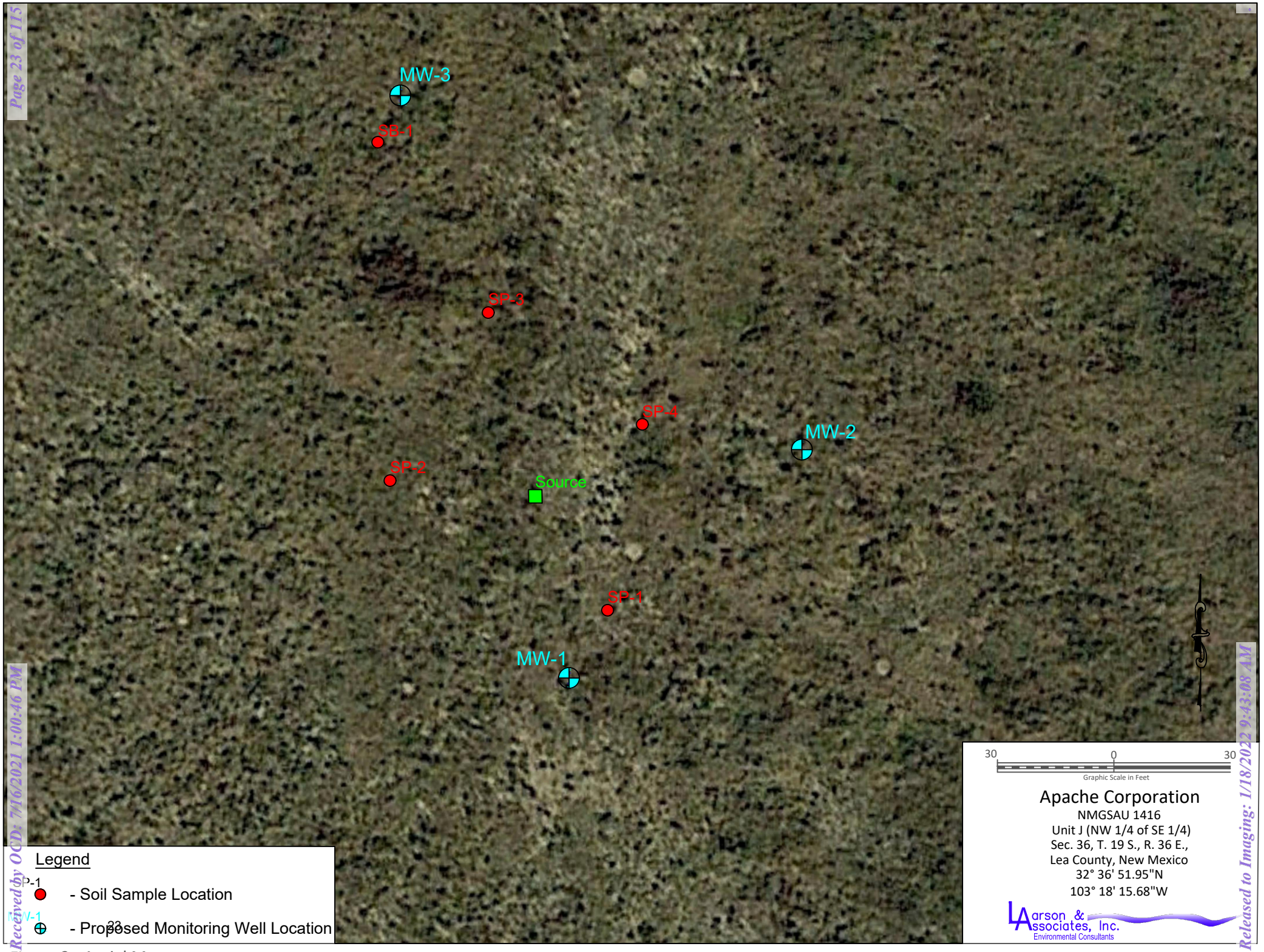


Figure 2 - Aerial Map

Attachment A

Boring Log

BORING RECORD

Start: 11:00
Finish: 11:50

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG
	0	Caliche, 7.5 YR 8/2, Moderately Cemented	Caliche	
	15	Sand, 2.5 YR 7/6, Fine to Medium Quartz Sand, Sub Angular to Sub Rounded, Moderately Sorted	SW	
	25	Sand, 5YR 7/4, Fine Grained Quartz Sand, Sub Rounded to Rounded, Well Sorted		
	30	Fine Grained Quartz Sand, 5 YR 8/3, Sub Rounded to Rounded, Well Sorted		
Depth to Water: 35.3	35	5 YR 8/1, Well Cemented, Quartzite		
	40	TD: 40'		

PID READING — PPM X _____ (2 4 6 8 10 12 14 16 18)

SAMPLE: NUMBER | PID READING | RECOVERY | DEPTH (1, 5, 10, 15, 20, 25, 30, 35, 40)

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

JOB NUMBER : Apache/ 21-0119-01
HOLE DIAMETER : 3"
LOCATION : NMGSAU 1416, Lea County
LAI GEOLOGIST : D. St.Germain
DRILLING CONTRACTOR : SDI
DRILLING METHOD : Air Rotary

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 5/24/2021

BORING NUMBER : SB-1

Attachment B

Laboratory Reports

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-2471-1
Client Project/Site: NMGSAU 1416

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

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
6/2/2021 10:16:06 AM

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

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: NMGSAU 1416

Laboratory Job ID: 880-2471-1

Table of Contents

Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

Job ID: 880-2471-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-2471-1

Receipt
The samples were received on 5/26/2021 8:47 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 3.9°C

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: SP-4 25' (880-2471-24). 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
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: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-1 1'
Lab Sample ID: 880-2471-1
Date Collected: 05/24/21 15:00 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:37	05/26/21 23:31	1
Toluene	<0.00198	U F1	0.00198		mg/Kg		05/26/21 09:37	05/26/21 23:31	1
Ethylbenzene	<0.00198	U F1	0.00198		mg/Kg		05/26/21 09:37	05/26/21 23:31	1
m-Xylene & p-Xylene	<0.00396	U F1	0.00396		mg/Kg		05/26/21 09:37	05/26/21 23:31	1
o-Xylene	<0.00198	U F1	0.00198		mg/Kg		05/26/21 09:37	05/26/21 23:31	1
Xylenes, Total	<0.00396	U F1	0.00396		mg/Kg		05/26/21 09:37	05/26/21 23:31	1
Total BTEX	<0.00396	U F1	0.00396		mg/Kg		05/26/21 09:37	05/26/21 23:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/26/21 09:37*	*05/26/21 23:31*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/26/21 09:37*	*05/26/21 23:31*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 13:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 13:49	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 13:49	1
Total TPH	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*05/26/21 10:32*	*05/26/21 13:49*	*1*
o-Terphenyl	*84*		*70 - 130*	*05/26/21 10:32*	*05/26/21 13:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**56.8**		5.03		mg/Kg			05/28/21 01:49	1

Client Sample ID: SP-1 5'
Lab Sample ID: 880-2471-2
Date Collected: 05/24/21 15:03 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/26/21 23:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/26/21 23:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/26/21 23:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/26/21 23:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/26/21 23:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/26/21 23:51	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/26/21 23:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*05/26/21 09:37*	*05/26/21 23:51*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/26/21 09:37*	*05/26/21 23:51*	*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	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 14:54	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-1 5'
Lab Sample ID: 880-2471-2
Date Collected: 05/24/21 15:03 **Matrix: Solid**
Date Received: 05/26/21 08:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 14:54	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 14:54	1
Total TPH	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/26/21 10:32*	*05/26/21 14:54*	*1*
o-Terphenyl	*85*		*70 - 130*	*05/26/21 10:32*	*05/26/21 14:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.9**		5.05		mg/Kg			05/28/21 02:06	1

Client Sample ID: SP-1 10'
Lab Sample ID: 880-2471-3
Date Collected: 05/24/21 15:05 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 00:12	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 00:12	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 00:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 00:12	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 00:12	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 00:12	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 00:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/26/21 09:37*	*05/27/21 00:12*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/26/21 09:37*	*05/27/21 00:12*	*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		05/26/21 10:32	05/26/21 15:16	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 15:16	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 15:16	1
Total TPH	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 15:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*05/26/21 10:32*	*05/26/21 15:16*	*1*
o-Terphenyl	*88*		*70 - 130*	*05/26/21 10:32*	*05/26/21 15:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.3**		5.05		mg/Kg			05/28/21 02:11	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-1 15'
Lab Sample ID: 880-2471-4
Date Collected: 05/24/21 15:10 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 00:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 00:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 00:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 00:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 00:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 00:32	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 00:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*05/26/21 09:37*	*05/27/21 00:32*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/26/21 09:37*	*05/27/21 00:32*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 15:37	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 15:37	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 15:37	1
Total TPH	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/26/21 10:32*	*05/26/21 15:37*	*1*
o-Terphenyl	*89*		*70 - 130*	*05/26/21 10:32*	*05/26/21 15:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.45**		5.00		mg/Kg			05/28/21 02:16	1

Client Sample ID: SP-1 20'
Lab Sample ID: 880-2471-5
Date Collected: 05/24/21 15:15 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:37	05/27/21 00:53	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:37	05/27/21 00:53	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:37	05/27/21 00:53	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		05/26/21 09:37	05/27/21 00:53	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:37	05/27/21 00:53	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		05/26/21 09:37	05/27/21 00:53	1
Total BTEX	<0.00397	U	0.00397		mg/Kg		05/26/21 09:37	05/27/21 00:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*05/26/21 09:37*	*05/27/21 00:53*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/26/21 09:37*	*05/27/21 00:53*	*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		05/26/21 10:32	05/26/21 15:59	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-1 20'
Lab Sample ID: 880-2471-5
Date Collected: 05/24/21 15:15 **Matrix: Solid**
Date Received: 05/26/21 08:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 15:59	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 15:59	1
Total TPH	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 15:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*05/26/21 10:32*	*05/26/21 15:59*	*1*
o-Terphenyl	*84*		*70 - 130*	*05/26/21 10:32*	*05/26/21 15:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.60**		4.98		mg/Kg			05/28/21 02:21	1

Client Sample ID: SP-1 25'
Lab Sample ID: 880-2471-6
Date Collected: 05/24/21 15:20 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 01:13	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 01:13	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 01:13	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 01:13	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 01:13	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 01:13	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*05/26/21 09:37*	*05/27/21 01:13*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/26/21 09:37*	*05/27/21 01:13*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 16:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 16:20	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 16:20	1
Total TPH	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 16:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*05/26/21 10:32*	*05/26/21 16:20*	*1*
o-Terphenyl	*98*		*70 - 130*	*05/26/21 10:32*	*05/26/21 16:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.1**		4.97		mg/Kg			05/28/21 02:26	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-2 1'
Lab Sample ID: 880-2471-7
Date Collected: 05/24/21 14:30 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/26/21 09:37	05/27/21 01:34	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/26/21 09:37	05/27/21 01:34	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/26/21 09:37	05/27/21 01:34	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/26/21 09:37	05/27/21 01:34	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/26/21 09:37	05/27/21 01:34	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/26/21 09:37	05/27/21 01:34	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		05/26/21 09:37	05/27/21 01:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*05/26/21 09:37*	*05/27/21 01:34*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*05/26/21 09:37*	*05/27/21 01:34*	*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		05/26/21 10:32	05/26/21 16:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 16:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 16:42	1
Total TPH	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 16:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/26/21 10:32*	*05/26/21 16:42*	*1*
o-Terphenyl	*85*		*70 - 130*	*05/26/21 10:32*	*05/26/21 16:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.9**		4.95		mg/Kg			05/28/21 02:31	1

Client Sample ID: SP-2 5'
Lab Sample ID: 880-2471-8
Date Collected: 05/24/21 14:32 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 01:54	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 01:54	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 01:54	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/26/21 09:37	05/27/21 01:54	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 01:54	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/26/21 09:37	05/27/21 01:54	1
Total BTEX	<0.00404	U	0.00404		mg/Kg		05/26/21 09:37	05/27/21 01:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*05/26/21 09:37*	*05/27/21 01:54*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/26/21 09:37*	*05/27/21 01:54*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 17:03	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-2 5'
Lab Sample ID: 880-2471-8
Date Collected: 05/24/21 14:32 **Matrix: Solid**
Date Received: 05/26/21 08:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 17:03	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 17:03	1
Total TPH	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/26/21 10:32*	*05/26/21 17:03*	*1*
o-Terphenyl	*88*		*70 - 130*	*05/26/21 10:32*	*05/26/21 17:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.83**		5.00		mg/Kg			05/28/21 02:35	1

Client Sample ID: SP-2 10'
Lab Sample ID: 880-2471-9
Date Collected: 05/24/21 14:35 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 02:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 02:14	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 02:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 02:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 02:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 02:14	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 02:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*05/26/21 09:37*	*05/27/21 02:14*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/26/21 09:37*	*05/27/21 02:14*	*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		05/26/21 10:32	05/26/21 17:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 17:25	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 17:25	1
Total TPH	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 17:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*05/26/21 10:32*	*05/26/21 17:25*	*1*
o-Terphenyl	*78*		*70 - 130*	*05/26/21 10:32*	*05/26/21 17:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.3**		5.02		mg/Kg			05/27/21 21:33	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-2 15'
Lab Sample ID: 880-2471-10
Date Collected: 05/24/21 14:37
Matrix: Solid
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 02:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 02:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 02:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/27/21 02:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 02:35	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/27/21 02:35	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/27/21 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*05/26/21 09:37*	*05/27/21 02:35*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/26/21 09:37*	*05/27/21 02:35*	*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		05/26/21 10:32	05/26/21 17:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 17:46	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 17:46	1
Total TPH	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*05/26/21 10:32*	*05/26/21 17:46*	*1*
o-Terphenyl	*88*		*70 - 130*	*05/26/21 10:32*	*05/26/21 17:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.09**		5.02		mg/Kg			05/27/21 21:47	1

Client Sample ID: SP-2 20'
Lab Sample ID: 880-2471-11
Date Collected: 05/24/21 14:40
Matrix: Solid
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 03:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 03:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 03:56	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/26/21 09:37	05/27/21 03:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 03:56	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/26/21 09:37	05/27/21 03:56	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		05/26/21 09:37	05/27/21 03:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*05/26/21 09:37*	*05/27/21 03:56*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/26/21 09:37*	*05/27/21 03:56*	*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	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 18:29	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-2 20'
Lab Sample ID: 880-2471-11
Date Collected: 05/24/21 14:40 **Matrix: Solid**
Date Received: 05/26/21 08:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 18:29	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 18:29	1
Total TPH	<49.8	U	49.8		mg/Kg		05/26/21 10:32	05/26/21 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*05/26/21 10:32*	*05/26/21 18:29*	*1*
o-Terphenyl	*100*		*70 - 130*	*05/26/21 10:32*	*05/26/21 18:29*	*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			05/27/21 21:52	1

Client Sample ID: SP-2 25'
Lab Sample ID: 880-2471-12
Date Collected: 05/24/21 14:46 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/26/21 09:37	05/27/21 04:17	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/26/21 09:37	05/27/21 04:17	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/26/21 09:37	05/27/21 04:17	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/26/21 09:37	05/27/21 04:17	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/26/21 09:37	05/27/21 04:17	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/26/21 09:37	05/27/21 04:17	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		05/26/21 09:37	05/27/21 04:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*05/26/21 09:37*	*05/27/21 04:17*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/26/21 09:37*	*05/27/21 04:17*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 18:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 18:50	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 18:50	1
Total TPH	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 18:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*05/26/21 10:32*	*05/26/21 18:50*	*1*
o-Terphenyl	*86*		*70 - 130*	*05/26/21 10:32*	*05/26/21 18:50*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.64**		5.03		mg/Kg			05/27/21 21:57	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-3 1'
Lab Sample ID: 880-2471-13
Date Collected: 05/24/21 14:10 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 04:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 04:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 04:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/27/21 04:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 04:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/27/21 04:37	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/27/21 04:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*05/26/21 09:37*	*05/27/21 04:37*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/26/21 09:37*	*05/27/21 04:37*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 19:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 19:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 19:12	1
Total TPH	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 19:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*05/26/21 10:32*	*05/26/21 19:12*	*1*
o-Terphenyl	*102*		*70 - 130*	*05/26/21 10:32*	*05/26/21 19:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.42		4.98		mg/Kg			05/27/21 22:02	1

Client Sample ID: SP-3 5'
Lab Sample ID: 880-2471-14
Date Collected: 05/24/21 14:12 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 04:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 04:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 04:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 04:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 04:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 04:57	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 04:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/26/21 09:37*	*05/27/21 04:57*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/26/21 09:37*	*05/27/21 04:57*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 19:33	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-3 5'
Lab Sample ID: 880-2471-14
Date Collected: 05/24/21 14:12 **Matrix: Solid**
Date Received: 05/26/21 08:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 19:33	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 19:33	1
Total TPH	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*05/26/21 10:32*	*05/26/21 19:33*	*1*
o-Terphenyl	*79*		*70 - 130*	*05/26/21 10:32*	*05/26/21 19:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.42**		4.98		mg/Kg			05/27/21 22:07	1

Client Sample ID: SP-3 10'
Lab Sample ID: 880-2471-15
Date Collected: 05/24/21 14:15 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 05:18	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 05:18	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 05:18	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/26/21 09:37	05/27/21 05:18	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 05:18	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/26/21 09:37	05/27/21 05:18	1
Total BTEX	<0.00404	U	0.00404		mg/Kg		05/26/21 09:37	05/27/21 05:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*05/26/21 09:37*	*05/27/21 05:18*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/26/21 09:37*	*05/27/21 05:18*	*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		05/26/21 10:32	05/26/21 20:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 20:16	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 20:16	1
Total TPH	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*05/26/21 10:32*	*05/26/21 20:16*	*1*
o-Terphenyl	*81*		*70 - 130*	*05/26/21 10:32*	*05/26/21 20:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17.8**		5.05		mg/Kg			05/27/21 22:12	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-3 15'
Lab Sample ID: 880-2471-16
Date Collected: 05/24/21 14:18 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 05:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 05:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 05:38	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/26/21 09:37	05/27/21 05:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 05:38	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/26/21 09:37	05/27/21 05:38	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		05/26/21 09:37	05/27/21 05:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*05/26/21 09:37*	*05/27/21 05:38*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/26/21 09:37*	*05/27/21 05:38*	*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		05/26/21 10:32	05/26/21 19:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 19:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 19:55	1
Total TPH	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/26/21 10:32*	*05/26/21 19:55*	*1*
o-Terphenyl	*85*		*70 - 130*	*05/26/21 10:32*	*05/26/21 19:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**42.0**		4.98		mg/Kg			05/27/21 22:26	1

Client Sample ID: SP-3 20'
Lab Sample ID: 880-2471-17
Date Collected: 05/24/21 14:21 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 05:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 05:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 05:59	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/26/21 09:37	05/27/21 05:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/27/21 05:59	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/26/21 09:37	05/27/21 05:59	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		05/26/21 09:37	05/27/21 05:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*05/26/21 09:37*	*05/27/21 05:59*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/26/21 09:37*	*05/27/21 05:59*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 20:37	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-3 20'
Lab Sample ID: 880-2471-17
Date Collected: 05/24/21 14:21 **Matrix: Solid**
Date Received: 05/26/21 08:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 20:37	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 20:37	1
Total TPH	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 20:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*05/26/21 10:32*	*05/26/21 20:37*	*1*
o-Terphenyl	*84*		*70 - 130*	*05/26/21 10:32*	*05/26/21 20:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**63.3**		5.00		mg/Kg			05/27/21 22:31	1

Client Sample ID: SP-3 25'
Lab Sample ID: 880-2471-18
Date Collected: 05/24/21 14:25 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:37	05/27/21 06:19	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:37	05/27/21 06:19	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:37	05/27/21 06:19	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/26/21 09:37	05/27/21 06:19	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:37	05/27/21 06:19	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/26/21 09:37	05/27/21 06:19	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		05/26/21 09:37	05/27/21 06:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*05/26/21 09:37*	*05/27/21 06:19*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/26/21 09:37*	*05/27/21 06:19*	*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		05/26/21 10:32	05/26/21 20:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 20:59	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 20:59	1
Total TPH	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 20:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*05/26/21 10:32*	*05/26/21 20:59*	*1*
o-Terphenyl	*95*		*70 - 130*	*05/26/21 10:32*	*05/26/21 20:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**86.2**		4.96		mg/Kg			05/27/21 22:46	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-4 1'
Lab Sample ID: 880-2471-19
Date Collected: 05/24/21 13:35 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 06:40	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 06:40	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 06:40	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		05/26/21 09:37	05/27/21 06:40	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/26/21 09:37	05/27/21 06:40	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		05/26/21 09:37	05/27/21 06:40	1
Total BTEX	<0.00403	U	0.00403		mg/Kg		05/26/21 09:37	05/27/21 06:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*05/26/21 09:37*	*05/27/21 06:40*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*05/26/21 09:37*	*05/27/21 06:40*	*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		05/26/21 10:32	05/26/21 21:21	1
Diesel Range Organics (Over C10-C28)	**1840**		49.9		mg/Kg		05/26/21 10:32	05/26/21 21:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/26/21 10:32	05/26/21 21:21	1
Total TPH	**1840**		49.9		mg/Kg		05/26/21 10:32	05/26/21 21:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/26/21 10:32*	*05/26/21 21:21*	*1*
o-Terphenyl	*86*		*70 - 130*	*05/26/21 10:32*	*05/26/21 21:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**224**		5.00		mg/Kg			05/27/21 22:51	1

Client Sample ID: SP-4 5'
Lab Sample ID: 880-2471-20
Date Collected: 05/24/21 13:37 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 07:00	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 07:00	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 07:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 07:00	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:37	05/27/21 07:00	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 07:00	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/26/21 09:37	05/27/21 07:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*05/26/21 09:37*	*05/27/21 07:00*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*05/26/21 09:37*	*05/27/21 07:00*	*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		05/26/21 10:32	05/26/21 21:42	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-4 5'
Lab Sample ID: 880-2471-20
Date Collected: 05/24/21 13:37
Matrix: Solid
Date Received: 05/26/21 08:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**122**		50.0		mg/Kg		05/26/21 10:32	05/26/21 21:42	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 21:42	1
Total TPH	**122**		50.0		mg/Kg		05/26/21 10:32	05/26/21 21:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*05/26/21 10:32*	*05/26/21 21:42*	*1*
o-Terphenyl	*86*		*70 - 130*	*05/26/21 10:32*	*05/26/21 21:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.4**		5.00		mg/Kg			05/27/21 22:56	1

Client Sample ID: SP-4 10'
Lab Sample ID: 880-2471-21
Date Collected: 05/24/21 13:40
Matrix: Solid
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F1 F2	0.00199		mg/Kg		05/26/21 09:40	05/26/21 23:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:40	05/26/21 23:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/26/21 09:40	05/26/21 23:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/26/21 09:40	05/26/21 23:44	1
o-Xylene	<0.00199	U F1	0.00199		mg/Kg		05/26/21 09:40	05/26/21 23:44	1
Xylenes, Total	<0.00398	U F1	0.00398		mg/Kg		05/26/21 09:40	05/26/21 23:44	1
Total BTEX	<0.00398	U F1	0.00398		mg/Kg		05/26/21 09:40	05/26/21 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/26/21 09:40*	*05/26/21 23:44*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*05/26/21 09:40*	*05/26/21 23:44*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:57	05/26/21 13:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/26/21 10:57	05/26/21 13:49	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/26/21 10:57	05/26/21 13:49	1
Total TPH	<49.9	U	49.9		mg/Kg		05/26/21 10:57	05/26/21 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*05/26/21 10:57*	*05/26/21 13:49*	*1*
o-Terphenyl	*92*		*70 - 130*	*05/26/21 10:57*	*05/26/21 13:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24.8**		4.97		mg/Kg			05/27/21 23:01	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-4 15'
Lab Sample ID: 880-2471-22
Date Collected: 05/24/21 13:45 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00267**		0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:04	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:04	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:04	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		05/26/21 09:40	05/27/21 00:04	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:04	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		05/26/21 09:40	05/27/21 00:04	1
Total BTEX	<0.00397	U	0.00397		mg/Kg		05/26/21 09:40	05/27/21 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*05/26/21 09:40*	*05/27/21 00:04*	*1*
1,4-Difluorobenzene (Surr)	*122*		*70 - 130*	*05/26/21 09:40*	*05/27/21 00:04*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/26/21 10:57	05/26/21 15:16	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/26/21 10:57	05/26/21 15:16	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/26/21 10:57	05/26/21 15:16	1
Total TPH	<49.8	U	49.8		mg/Kg		05/26/21 10:57	05/26/21 15:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*05/26/21 10:57*	*05/26/21 15:16*	*1*
o-Terphenyl	*111*		*70 - 130*	*05/26/21 10:57*	*05/26/21 15:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**31.7**		4.99		mg/Kg			05/27/21 23:06	1

Client Sample ID: SP-4 20'
Lab Sample ID: 880-2471-23
Date Collected: 05/24/21 13:52 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:25	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:25	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:25	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		05/26/21 09:40	05/27/21 00:25	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:25	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		05/26/21 09:40	05/27/21 00:25	1
Total BTEX	<0.00397	U	0.00397		mg/Kg		05/26/21 09:40	05/27/21 00:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*05/26/21 09:40*	*05/27/21 00:25*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*05/26/21 09:40*	*05/27/21 00:25*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/26/21 10:57	05/26/21 15:37	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Client Sample ID: SP-4 20'
Lab Sample ID: 880-2471-23
Date Collected: 05/24/21 13:52 **Matrix: Solid**
Date Received: 05/26/21 08:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/26/21 10:57	05/26/21 15:37	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/26/21 10:57	05/26/21 15:37	1
Total TPH	<49.8	U	49.8		mg/Kg		05/26/21 10:57	05/26/21 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/26/21 10:57*	*05/26/21 15:37*	*1*
o-Terphenyl	*101*		*70 - 130*	*05/26/21 10:57*	*05/26/21 15:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**54.6**		4.95		mg/Kg			05/27/21 23:11	1

Client Sample ID: SP-4 25'
Lab Sample ID: 880-2471-24
Date Collected: 05/24/21 13:57 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00356**		0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:46	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:46	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:46	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/26/21 09:40	05/27/21 00:46	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/26/21 09:40	05/27/21 00:46	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/26/21 09:40	05/27/21 00:46	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		05/26/21 09:40	05/27/21 00:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/26/21 09:40*	*05/27/21 00:46*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*05/26/21 09:40*	*05/27/21 00:46*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:57	05/26/21 15:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/26/21 10:57	05/26/21 15:59	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/26/21 10:57	05/26/21 15:59	1
Total TPH	<49.9	U	49.9		mg/Kg		05/26/21 10:57	05/26/21 15:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/26/21 10:57*	*05/26/21 15:59*	*1*
o-Terphenyl	*95*		*70 - 130*	*05/26/21 10:57*	*05/26/21 15:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75.0**		5.00		mg/Kg			05/27/21 23:15	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

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)
880-2471-1	SP-1 1'	90	93
880-2471-1 MS	SP-1 1'	103	102
880-2471-1 MSD	SP-1 1'	113	108
880-2471-2	SP-1 5'	84	96
880-2471-3	SP-1 10'	90	94
880-2471-4	SP-1 15'	98	98
880-2471-5	SP-1 20'	91	97
880-2471-6	SP-1 25'	96	97
880-2471-7	SP-2 1'	89	101
880-2471-8	SP-2 5'	84	93
880-2471-9	SP-2 10'	96	99
880-2471-10	SP-2 15'	83	95
880-2471-11	SP-2 20'	98	94
880-2471-12	SP-2 25'	100	92
880-2471-13	SP-3 1'	91	97
880-2471-14	SP-3 5'	90	98
880-2471-15	SP-3 10'	95	94
880-2471-16	SP-3 15'	100	97
880-2471-17	SP-3 20'	94	94
880-2471-18	SP-3 25'	89	95
880-2471-19	SP-4 1'	126	105
880-2471-20	SP-4 5'	125	106
880-2471-21	SP-4 10'	90	103
880-2471-21 MS	SP-4 10'	90	126
880-2471-21 MSD	SP-4 10'	86	107
880-2471-22	SP-4 15'	95	122
880-2471-23	SP-4 20'	96	112
880-2471-24	SP-4 25'	102	114
LCS 880-3516/1-A	Lab Control Sample	100	105
LCS 880-3517/1-A	Lab Control Sample	81	116
LCSD 880-3516/2-A	Lab Control Sample Dup	97	104
LCSD 880-3517/2-A	Lab Control Sample Dup	84	117
MB 880-3414/5-A	Method Blank	109	114
MB 880-3494/5-A	Method Blank	88	101
MB 880-3516/5-A	Method Blank	85	94
MB 880-3517/5-A	Method Blank	98	87

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)
880-2471-1	SP-1 1'	94	84
880-2471-1 MS	SP-1 1'	87	69 S1-
880-2471-1 MSD	SP-1 1'	86	69 S1-

Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

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)								
880-2471-2	SP-1 5'	95	85								
880-2471-3	SP-1 10'	97	88								
880-2471-4	SP-1 15'	98	89								
880-2471-5	SP-1 20'	94	84								
880-2471-6	SP-1 25'	115	98								
880-2471-7	SP-2 1'	95	85								
880-2471-8	SP-2 5'	98	88								
880-2471-9	SP-2 10'	89	78								
880-2471-10	SP-2 15'	97	88								
880-2471-11	SP-2 20'	115	100								
880-2471-12	SP-2 25'	97	86								
880-2471-13	SP-3 1'	120	102								
880-2471-14	SP-3 5'	93	79								
880-2471-15	SP-3 10'	93	81								
880-2471-16	SP-3 15'	96	85								
880-2471-17	SP-3 20'	94	84								
880-2471-18	SP-3 25'	112	95								
880-2471-19	SP-4 1'	111	86								
880-2471-20	SP-4 5'	97	86								
880-2471-21	SP-4 10'	88	92								
880-2471-21 MS	SP-4 10'	78	75								
880-2471-21 MSD	SP-4 10'	95	90								
880-2471-22	SP-4 15'	110	111								
880-2471-23	SP-4 20'	98	101								
880-2471-24	SP-4 25'	98	95								
LCS 880-3521/2-A	Lab Control Sample	93	76								
LCS 880-3527/2-A	Lab Control Sample	100	95								
LCSD 880-3521/3-A	Lab Control Sample Dup	90	77								
LCSD 880-3527/3-A	Lab Control Sample Dup	101	96								
MB 880-3521/1-A	Method Blank	86	77								
MB 880-3527/1-A	Method Blank	100	103								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3414/5-A
Matrix: Solid
Analysis Batch: 3497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3414

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/26/21 08:45	05/26/21 11:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/26/21 08:45	05/26/21 11:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/26/21 08:45	05/26/21 11:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/26/21 08:45	05/26/21 11:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/26/21 08:45	05/26/21 11:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/26/21 08:45	05/26/21 11:39	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/26/21 08:45	05/26/21 11:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/26/21 08:45*	*05/26/21 11:39*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*05/26/21 08:45*	*05/26/21 11:39*	*1*

Lab Sample ID: MB 880-3494/5-A
Matrix: Solid
Analysis Batch: 3496

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3494

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/26/21 08:45	05/26/21 12:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/26/21 08:45	05/26/21 12:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/26/21 08:45	05/26/21 12:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/26/21 08:45	05/26/21 12:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/26/21 08:45	05/26/21 12:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/26/21 08:45	05/26/21 12:17	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/26/21 08:45	05/26/21 12:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*05/26/21 08:45*	*05/26/21 12:17*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*05/26/21 08:45*	*05/26/21 12:17*	*1*

Lab Sample ID: MB 880-3516/5-A
Matrix: Solid
Analysis Batch: 3496

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3516

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/26/21 23:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/26/21 23:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/26/21 23:10	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/26/21 23:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:37	05/26/21 23:10	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/26/21 23:10	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/26/21 09:37	05/26/21 23:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*05/26/21 09:37*	*05/26/21 23:10*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/26/21 09:37*	*05/26/21 23:10*	*1*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

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

Lab Sample ID: LCS 880-3516/1-A
Matrix: Solid
Analysis Batch: 3496

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3516

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1135		mg/Kg		113	70 - 130		
Toluene			0.100	0.1061		mg/Kg		106	70 - 130		
Ethylbenzene			0.100	0.1043		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2163		mg/Kg		108	70 - 130		
o-Xylene			0.100	0.1080		mg/Kg		108	70 - 130		

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

Lab Sample ID: LCSD 880-3516/2-A
Matrix: Solid
Analysis Batch: 3496

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3516

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1113		mg/Kg		111	70 - 130	2	35
Toluene			0.100	0.1055		mg/Kg		106	70 - 130	1	35
Ethylbenzene			0.100	0.1012		mg/Kg		101	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2076		mg/Kg		104	70 - 130	4	35
o-Xylene			0.100	0.1031		mg/Kg		103	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-2471-1 MS
Matrix: Solid
Analysis Batch: 3496

Client Sample ID: SP-1 1'
Prep Type: Total/NA
Prep Batch: 3516

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00198	U	0.100	0.07297		mg/Kg		73	70 - 130		
Toluene	<0.00198	U F1	0.100	0.06973	F1	mg/Kg		69	70 - 130		
Ethylbenzene	<0.00198	U F1	0.100	0.06514	F1	mg/Kg		65	70 - 130		
m-Xylene & p-Xylene	<0.00396	U F1	0.201	0.1332	F1	mg/Kg		66	70 - 130		
o-Xylene	<0.00198	U F1	0.100	0.06707	F1	mg/Kg		67	70 - 130		

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

Lab Sample ID: 880-2471-1 MSD
Matrix: Solid
Analysis Batch: 3496

Client Sample ID: SP-1 1'
Prep Type: Total/NA
Prep Batch: 3516

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0994	0.08519		mg/Kg		86	70 - 130	15	35
Toluene	<0.00198	U F1	0.0994	0.08145		mg/Kg		82	70 - 130	16	35
Ethylbenzene	<0.00198	U F1	0.0994	0.07595		mg/Kg		76	70 - 130	15	35

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

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

Lab Sample ID: 880-2471-1 MSD
Matrix: Solid
Analysis Batch: 3496

Client Sample ID: SP-1 1'
Prep Type: Total/NA
Prep Batch: 3516

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m-Xylene & p-Xylene	<0.00396	U F1	0.199	0.1574		mg/Kg		79	70 - 130	17	35
o-Xylene	<0.00198	U F1	0.0994	0.07953		mg/Kg		80	70 - 130	17	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: MB 880-3517/5-A
Matrix: Solid
Analysis Batch: 3497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3517

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:40	05/26/21 23:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:40	05/26/21 23:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:40	05/26/21 23:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/26/21 09:40	05/26/21 23:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/26/21 09:40	05/26/21 23:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/26/21 09:40	05/26/21 23:22	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/26/21 09:40	05/26/21 23:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*05/26/21 09:40*	*05/26/21 23:22*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*05/26/21 09:40*	*05/26/21 23:22*	*1*

Lab Sample ID: LCS 880-3517/1-A
Matrix: Solid
Analysis Batch: 3497

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3517

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1039		mg/Kg		104	70 - 130		
Toluene			0.100	0.09244		mg/Kg		92	70 - 130		
Ethylbenzene			0.100	0.08359		mg/Kg		84	70 - 130		
m-Xylene & p-Xylene			0.200	0.1660		mg/Kg		83	70 - 130		
o-Xylene			0.100	0.08061		mg/Kg		81	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: LCSD 880-3517/2-A
Matrix: Solid
Analysis Batch: 3497

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3517

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1097		mg/Kg		110	70 - 130	5	35
Toluene			0.100	0.09767		mg/Kg		98	70 - 130	6	35
Ethylbenzene			0.100	0.08869		mg/Kg		89	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1720		mg/Kg		86	70 - 130	4	35

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

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

Lab Sample ID: LCSD 880-3517/2-A
Matrix: Solid
Analysis Batch: 3497

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3517

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
o-Xylene			0.100	0.08510		mg/Kg		85	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

Lab Sample ID: 880-2471-21 MS
Matrix: Solid
Analysis Batch: 3497

Client Sample ID: SP-4 10'
Prep Type: Total/NA
Prep Batch: 3517

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U F1 F2	0.0990	0.09342		mg/Kg		93	70 - 130
Toluene	<0.00199	U	0.0990	0.08127		mg/Kg		82	70 - 130
Ethylbenzene	<0.00199	U	0.0990	0.07497		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1448		mg/Kg		73	70 - 130
o-Xylene	<0.00199	U F1	0.0990	0.07177		mg/Kg		72	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*126*		*70 - 130*

Lab Sample ID: 880-2471-21 MSD
Matrix: Solid
Analysis Batch: 3497

Client Sample ID: SP-4 10'
Prep Type: Total/NA
Prep Batch: 3517

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F1 F2	0.0990	0.06139	F1 F2	mg/Kg		61	70 - 130	41	35
Toluene	<0.00199	U	0.0990	0.07213		mg/Kg		73	70 - 130	12	35
Ethylbenzene	<0.00199	U	0.0990	0.07003		mg/Kg		71	70 - 130	7	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1386		mg/Kg		70	70 - 130	4	35
o-Xylene	<0.00199	U F1	0.0990	0.06490	F1	mg/Kg		66	70 - 130	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

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

Lab Sample ID: MB 880-3521/1-A
Matrix: Solid
Analysis Batch: 3502

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3521

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		05/26/21 10:32	05/26/21 12:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 12:45	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 12:45	1
Total TPH	<50.0	U	50.0		mg/Kg		05/26/21 10:32	05/26/21 12:45	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130	05/26/21 10:32	05/26/21 12:45	1
o-Terphenyl	77		70 - 130	05/26/21 10:32	05/26/21 12:45	1

Lab Sample ID: LCS 880-3521/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3502 — **Prep Batch: 3521**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	847.7		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	967.6		mg/Kg		97	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	76		70 - 130

Lab Sample ID: LCSD 880-3521/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3502 — **Prep Batch: 3521**

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	3	20
Diesel Range Organics (Over C10-C28)			1000	972.9		mg/Kg		97	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	77		70 - 130

Lab Sample ID: 880-2471-1 MS — **Client Sample ID: SP-1 1'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3502 — **Prep Batch: 3521**

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	996	888.4		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1027		mg/Kg		103	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	69	S1-	70 - 130

Lab Sample ID: 880-2471-1 MSD — **Client Sample ID: SP-1 1'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3502 — **Prep Batch: 3521**

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	996	881.3		mg/Kg		88	70 - 130	1	20

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QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

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

Lab Sample ID: 880-2471-1 MSD **Client Sample ID: SP-1 1'**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 3502 **Prep Batch: 3521**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1029		mg/Kg		103	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*86*		*70 - 130*
o-Terphenyl	*69*	*S1-*	*70 - 130*

Lab Sample ID: MB 880-3527/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 3504 **Prep Batch: 3527**

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		05/26/21 10:57	05/26/21 12:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/26/21 10:57	05/26/21 12:45	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/26/21 10:57	05/26/21 12:45	1
Total TPH	<50.0	U	50.0		mg/Kg		05/26/21 10:57	05/26/21 12:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*05/26/21 10:57*	*05/26/21 12:45*	*1*
o-Terphenyl	*103*		*70 - 130*	*05/26/21 10:57*	*05/26/21 12:45*	*1*

Lab Sample ID: LCS 880-3527/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 3504 **Prep Batch: 3527**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1073		mg/Kg		107	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1174		mg/Kg		117	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: LCSD 880-3527/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 3504 **Prep Batch: 3527**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	967.4		mg/Kg		97	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1193		mg/Kg		119	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

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

Lab Sample ID: LCSD 880-3527/3-A
Matrix: Solid
Analysis Batch: 3504

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3527

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*96*		*70 - 130*

Lab Sample ID: 880-2471-21 MS
Matrix: Solid
Analysis Batch: 3504

Client Sample ID: SP-4 10'
Prep Type: Total/NA
Prep Batch: 3527

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	996	762.1		mg/Kg		77	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	891.6		mg/Kg		90	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*78*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

Lab Sample ID: 880-2471-21 MSD
Matrix: Solid
Analysis Batch: 3504

Client Sample ID: SP-4 10'
Prep Type: Total/NA
Prep Batch: 3527

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	996	925.9		mg/Kg		93	70 - 130	19	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1071		mg/Kg		108	70 - 130	18	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*90*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3525/1-A
Matrix: Solid
Analysis Batch: 3552

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			05/27/21 23:43	1

Lab Sample ID: LCS 880-3525/2-A
Matrix: Solid
Analysis Batch: 3552

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			250	266.2		mg/Kg		106	90 - 110

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-3525/3-A
Matrix: Solid
Analysis Batch: 3552

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	267.6		mg/Kg		107	90 - 110	1	20

Lab Sample ID: 880-2469-A-2-B MS
Matrix: Solid
Analysis Batch: 3552

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	49.0		248	313.2		mg/Kg		107	90 - 110		

Lab Sample ID: 880-2469-A-2-C MSD
Matrix: Solid
Analysis Batch: 3552

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	49.0		248	313.4		mg/Kg		107	90 - 110	0	20

Lab Sample ID: MB 880-3528/1-A
Matrix: Solid
Analysis Batch: 3578

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			05/27/21 20:49	1

Lab Sample ID: LCS 880-3528/2-A
Matrix: Solid
Analysis Batch: 3578

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	255.8		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-3528/3-A
Matrix: Solid
Analysis Batch: 3578

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	0	20

Lab Sample ID: 880-2471-15 MS
Matrix: Solid
Analysis Batch: 3578

Client Sample ID: SP-3 10'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	17.8		253	277.3		mg/Kg		103	90 - 110		

Lab Sample ID: 880-2471-15 MSD
Matrix: Solid
Analysis Batch: 3578

Client Sample ID: SP-3 10'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	17.8		253	277.1		mg/Kg		103	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

GC VOA

Prep Batch: 3414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-3414/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 3494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-3494/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 3496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-1	SP-1 1'	Total/NA	Solid	8021B	3516
880-2471-2	SP-1 5'	Total/NA	Solid	8021B	3516
880-2471-3	SP-1 10'	Total/NA	Solid	8021B	3516
880-2471-4	SP-1 15'	Total/NA	Solid	8021B	3516
880-2471-5	SP-1 20'	Total/NA	Solid	8021B	3516
880-2471-6	SP-1 25'	Total/NA	Solid	8021B	3516
880-2471-7	SP-2 1'	Total/NA	Solid	8021B	3516
880-2471-8	SP-2 5'	Total/NA	Solid	8021B	3516
880-2471-9	SP-2 10'	Total/NA	Solid	8021B	3516
880-2471-10	SP-2 15'	Total/NA	Solid	8021B	3516
880-2471-11	SP-2 20'	Total/NA	Solid	8021B	3516
880-2471-12	SP-2 25'	Total/NA	Solid	8021B	3516
880-2471-13	SP-3 1'	Total/NA	Solid	8021B	3516
880-2471-14	SP-3 5'	Total/NA	Solid	8021B	3516
880-2471-15	SP-3 10'	Total/NA	Solid	8021B	3516
880-2471-16	SP-3 15'	Total/NA	Solid	8021B	3516
880-2471-17	SP-3 20'	Total/NA	Solid	8021B	3516
880-2471-18	SP-3 25'	Total/NA	Solid	8021B	3516
880-2471-19	SP-4 1'	Total/NA	Solid	8021B	3516
880-2471-20	SP-4 5'	Total/NA	Solid	8021B	3516
MB 880-3494/5-A	Method Blank	Total/NA	Solid	8021B	3494
MB 880-3516/5-A	Method Blank	Total/NA	Solid	8021B	3516
LCS 880-3516/1-A	Lab Control Sample	Total/NA	Solid	8021B	3516
LCSD 880-3516/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3516
880-2471-1 MS	SP-1 1'	Total/NA	Solid	8021B	3516
880-2471-1 MSD	SP-1 1'	Total/NA	Solid	8021B	3516

Analysis Batch: 3497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-21	SP-4 10'	Total/NA	Solid	8021B	3517
880-2471-22	SP-4 15'	Total/NA	Solid	8021B	3517
880-2471-23	SP-4 20'	Total/NA	Solid	8021B	3517
880-2471-24	SP-4 25'	Total/NA	Solid	8021B	3517
MB 880-3414/5-A	Method Blank	Total/NA	Solid	8021B	3414
MB 880-3517/5-A	Method Blank	Total/NA	Solid	8021B	3517
LCS 880-3517/1-A	Lab Control Sample	Total/NA	Solid	8021B	3517
LCSD 880-3517/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3517
880-2471-21 MS	SP-4 10'	Total/NA	Solid	8021B	3517
880-2471-21 MSD	SP-4 10'	Total/NA	Solid	8021B	3517

Prep Batch: 3516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-1	SP-1 1'	Total/NA	Solid	5035	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

GC VOA (Continued)

Prep Batch: 3516 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-2	SP-1 5'	Total/NA	Solid	5035	
880-2471-3	SP-1 10'	Total/NA	Solid	5035	
880-2471-4	SP-1 15'	Total/NA	Solid	5035	
880-2471-5	SP-1 20'	Total/NA	Solid	5035	
880-2471-6	SP-1 25'	Total/NA	Solid	5035	
880-2471-7	SP-2 1'	Total/NA	Solid	5035	
880-2471-8	SP-2 5'	Total/NA	Solid	5035	
880-2471-9	SP-2 10'	Total/NA	Solid	5035	
880-2471-10	SP-2 15'	Total/NA	Solid	5035	
880-2471-11	SP-2 20'	Total/NA	Solid	5035	
880-2471-12	SP-2 25'	Total/NA	Solid	5035	
880-2471-13	SP-3 1'	Total/NA	Solid	5035	
880-2471-14	SP-3 5'	Total/NA	Solid	5035	
880-2471-15	SP-3 10'	Total/NA	Solid	5035	
880-2471-16	SP-3 15'	Total/NA	Solid	5035	
880-2471-17	SP-3 20'	Total/NA	Solid	5035	
880-2471-18	SP-3 25'	Total/NA	Solid	5035	
880-2471-19	SP-4 1'	Total/NA	Solid	5035	
880-2471-20	SP-4 5'	Total/NA	Solid	5035	
MB 880-3516/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3516/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3516/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-2471-1 MS	SP-1 1'	Total/NA	Solid	5035	
880-2471-1 MSD	SP-1 1'	Total/NA	Solid	5035	

Prep Batch: 3517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-21	SP-4 10'	Total/NA	Solid	5035	
880-2471-22	SP-4 15'	Total/NA	Solid	5035	
880-2471-23	SP-4 20'	Total/NA	Solid	5035	
880-2471-24	SP-4 25'	Total/NA	Solid	5035	
MB 880-3517/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3517/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3517/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-2471-21 MS	SP-4 10'	Total/NA	Solid	5035	
880-2471-21 MSD	SP-4 10'	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 3502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-1	SP-1 1'	Total/NA	Solid	8015B NM	3521
880-2471-2	SP-1 5'	Total/NA	Solid	8015B NM	3521
880-2471-3	SP-1 10'	Total/NA	Solid	8015B NM	3521
880-2471-4	SP-1 15'	Total/NA	Solid	8015B NM	3521
880-2471-5	SP-1 20'	Total/NA	Solid	8015B NM	3521
880-2471-6	SP-1 25'	Total/NA	Solid	8015B NM	3521
880-2471-7	SP-2 1'	Total/NA	Solid	8015B NM	3521
880-2471-8	SP-2 5'	Total/NA	Solid	8015B NM	3521
880-2471-9	SP-2 10'	Total/NA	Solid	8015B NM	3521
880-2471-10	SP-2 15'	Total/NA	Solid	8015B NM	3521

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

GC Semi VOA (Continued)

Analysis Batch: 3502 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-11	SP-2 20'	Total/NA	Solid	8015B NM	3521
880-2471-12	SP-2 25'	Total/NA	Solid	8015B NM	3521
880-2471-13	SP-3 1'	Total/NA	Solid	8015B NM	3521
880-2471-14	SP-3 5'	Total/NA	Solid	8015B NM	3521
880-2471-15	SP-3 10'	Total/NA	Solid	8015B NM	3521
880-2471-16	SP-3 15'	Total/NA	Solid	8015B NM	3521
880-2471-17	SP-3 20'	Total/NA	Solid	8015B NM	3521
880-2471-18	SP-3 25'	Total/NA	Solid	8015B NM	3521
880-2471-19	SP-4 1'	Total/NA	Solid	8015B NM	3521
880-2471-20	SP-4 5'	Total/NA	Solid	8015B NM	3521
MB 880-3521/1-A	Method Blank	Total/NA	Solid	8015B NM	3521
LCS 880-3521/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3521
LCSD 880-3521/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3521
880-2471-1 MS	SP-1 1'	Total/NA	Solid	8015B NM	3521
880-2471-1 MSD	SP-1 1'	Total/NA	Solid	8015B NM	3521

Analysis Batch: 3504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-21	SP-4 10'	Total/NA	Solid	8015B NM	3527
880-2471-22	SP-4 15'	Total/NA	Solid	8015B NM	3527
880-2471-23	SP-4 20'	Total/NA	Solid	8015B NM	3527
880-2471-24	SP-4 25'	Total/NA	Solid	8015B NM	3527
MB 880-3527/1-A	Method Blank	Total/NA	Solid	8015B NM	3527
LCS 880-3527/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3527
LCSD 880-3527/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3527
880-2471-21 MS	SP-4 10'	Total/NA	Solid	8015B NM	3527
880-2471-21 MSD	SP-4 10'	Total/NA	Solid	8015B NM	3527

Prep Batch: 3521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-1	SP-1 1'	Total/NA	Solid	8015NM Prep	
880-2471-2	SP-1 5'	Total/NA	Solid	8015NM Prep	
880-2471-3	SP-1 10'	Total/NA	Solid	8015NM Prep	
880-2471-4	SP-1 15'	Total/NA	Solid	8015NM Prep	
880-2471-5	SP-1 20'	Total/NA	Solid	8015NM Prep	
880-2471-6	SP-1 25'	Total/NA	Solid	8015NM Prep	
880-2471-7	SP-2 1'	Total/NA	Solid	8015NM Prep	
880-2471-8	SP-2 5'	Total/NA	Solid	8015NM Prep	
880-2471-9	SP-2 10'	Total/NA	Solid	8015NM Prep	
880-2471-10	SP-2 15'	Total/NA	Solid	8015NM Prep	
880-2471-11	SP-2 20'	Total/NA	Solid	8015NM Prep	
880-2471-12	SP-2 25'	Total/NA	Solid	8015NM Prep	
880-2471-13	SP-3 1'	Total/NA	Solid	8015NM Prep	
880-2471-14	SP-3 5'	Total/NA	Solid	8015NM Prep	
880-2471-15	SP-3 10'	Total/NA	Solid	8015NM Prep	
880-2471-16	SP-3 15'	Total/NA	Solid	8015NM Prep	
880-2471-17	SP-3 20'	Total/NA	Solid	8015NM Prep	
880-2471-18	SP-3 25'	Total/NA	Solid	8015NM Prep	
880-2471-19	SP-4 1'	Total/NA	Solid	8015NM Prep	
880-2471-20	SP-4 5'	Total/NA	Solid	8015NM Prep	
MB 880-3521/1-A	Method Blank	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

GC Semi VOA (Continued)

Prep Batch: 3521 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-3521/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3521/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-2471-1 MS	SP-1 1'	Total/NA	Solid	8015NM Prep	
880-2471-1 MSD	SP-1 1'	Total/NA	Solid	8015NM Prep	

Prep Batch: 3527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-21	SP-4 10'	Total/NA	Solid	8015NM Prep	
880-2471-22	SP-4 15'	Total/NA	Solid	8015NM Prep	
880-2471-23	SP-4 20'	Total/NA	Solid	8015NM Prep	
880-2471-24	SP-4 25'	Total/NA	Solid	8015NM Prep	
MB 880-3527/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3527/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3527/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-2471-21 MS	SP-4 10'	Total/NA	Solid	8015NM Prep	
880-2471-21 MSD	SP-4 10'	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 3525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-1	SP-1 1'	Soluble	Solid	DI Leach	
880-2471-2	SP-1 5'	Soluble	Solid	DI Leach	
880-2471-3	SP-1 10'	Soluble	Solid	DI Leach	
880-2471-4	SP-1 15'	Soluble	Solid	DI Leach	
880-2471-5	SP-1 20'	Soluble	Solid	DI Leach	
880-2471-6	SP-1 25'	Soluble	Solid	DI Leach	
880-2471-7	SP-2 1'	Soluble	Solid	DI Leach	
880-2471-8	SP-2 5'	Soluble	Solid	DI Leach	
MB 880-3525/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3525/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3525/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-2469-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-2469-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 3528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-9	SP-2 10'	Soluble	Solid	DI Leach	
880-2471-10	SP-2 15'	Soluble	Solid	DI Leach	
880-2471-11	SP-2 20'	Soluble	Solid	DI Leach	
880-2471-12	SP-2 25'	Soluble	Solid	DI Leach	
880-2471-13	SP-3 1'	Soluble	Solid	DI Leach	
880-2471-14	SP-3 5'	Soluble	Solid	DI Leach	
880-2471-15	SP-3 10'	Soluble	Solid	DI Leach	
880-2471-16	SP-3 15'	Soluble	Solid	DI Leach	
880-2471-17	SP-3 20'	Soluble	Solid	DI Leach	
880-2471-18	SP-3 25'	Soluble	Solid	DI Leach	
880-2471-19	SP-4 1'	Soluble	Solid	DI Leach	
880-2471-20	SP-4 5'	Soluble	Solid	DI Leach	
880-2471-21	SP-4 10'	Soluble	Solid	DI Leach	
880-2471-22	SP-4 15'	Soluble	Solid	DI Leach	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

HPLC/IC (Continued)

Leach Batch: 3528 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-23	SP-4 20'	Soluble	Solid	DI Leach	
880-2471-24	SP-4 25'	Soluble	Solid	DI Leach	
MB 880-3528/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3528/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3528/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-2471-15 MS	SP-3 10'	Soluble	Solid	DI Leach	
880-2471-15 MSD	SP-3 10'	Soluble	Solid	DI Leach	

Analysis Batch: 3552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-1	SP-1 1'	Soluble	Solid	300.0	3525
880-2471-2	SP-1 5'	Soluble	Solid	300.0	3525
880-2471-3	SP-1 10'	Soluble	Solid	300.0	3525
880-2471-4	SP-1 15'	Soluble	Solid	300.0	3525
880-2471-5	SP-1 20'	Soluble	Solid	300.0	3525
880-2471-6	SP-1 25'	Soluble	Solid	300.0	3525
880-2471-7	SP-2 1'	Soluble	Solid	300.0	3525
880-2471-8	SP-2 5'	Soluble	Solid	300.0	3525
MB 880-3525/1-A	Method Blank	Soluble	Solid	300.0	3525
LCS 880-3525/2-A	Lab Control Sample	Soluble	Solid	300.0	3525
LCSD 880-3525/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3525
880-2469-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	3525
880-2469-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	3525

Analysis Batch: 3578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2471-9	SP-2 10'	Soluble	Solid	300.0	3528
880-2471-10	SP-2 15'	Soluble	Solid	300.0	3528
880-2471-11	SP-2 20'	Soluble	Solid	300.0	3528
880-2471-12	SP-2 25'	Soluble	Solid	300.0	3528
880-2471-13	SP-3 1'	Soluble	Solid	300.0	3528
880-2471-14	SP-3 5'	Soluble	Solid	300.0	3528
880-2471-15	SP-3 10'	Soluble	Solid	300.0	3528
880-2471-16	SP-3 15'	Soluble	Solid	300.0	3528
880-2471-17	SP-3 20'	Soluble	Solid	300.0	3528
880-2471-18	SP-3 25'	Soluble	Solid	300.0	3528
880-2471-19	SP-4 1'	Soluble	Solid	300.0	3528
880-2471-20	SP-4 5'	Soluble	Solid	300.0	3528
880-2471-21	SP-4 10'	Soluble	Solid	300.0	3528
880-2471-22	SP-4 15'	Soluble	Solid	300.0	3528
880-2471-23	SP-4 20'	Soluble	Solid	300.0	3528
880-2471-24	SP-4 25'	Soluble	Solid	300.0	3528
MB 880-3528/1-A	Method Blank	Soluble	Solid	300.0	3528
LCS 880-3528/2-A	Lab Control Sample	Soluble	Solid	300.0	3528
LCSD 880-3528/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3528
880-2471-15 MS	SP-3 10'	Soluble	Solid	300.0	3528
880-2471-15 MSD	SP-3 10'	Soluble	Solid	300.0	3528

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

Client Sample ID: SP-1 1'

Date Collected: 05/24/21 15:00
Date Received: 05/26/21 08:47

Lab Sample ID: 880-2471-1
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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/26/21 23:31	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 13:49	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	3525	05/26/21 10:52	CH	XEN MID
Soluble	Analysis	300.0		1			3552	05/28/21 01:49	CH	XEN MID

Client Sample ID: SP-1 5'

Date Collected: 05/24/21 15:03
Date Received: 05/26/21 08:47

Lab Sample ID: 880-2471-2
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			5.00 g	5 mL	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/26/21 23:51	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 14:54	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3525	05/26/21 10:52	CH	XEN MID
Soluble	Analysis	300.0		1			3552	05/28/21 02:06	CH	XEN MID

Client Sample ID: SP-1 10'

Date Collected: 05/24/21 15:05
Date Received: 05/26/21 08:47

Lab Sample ID: 880-2471-3
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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 00:12	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 15:16	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3525	05/26/21 10:52	CH	XEN MID
Soluble	Analysis	300.0		1			3552	05/28/21 02:11	CH	XEN MID

Client Sample ID: SP-1 15'

Date Collected: 05/24/21 15:10
Date Received: 05/26/21 08:47

Lab Sample ID: 880-2471-4
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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 00:32	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 15:37	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3525	05/26/21 10:52	CH	XEN MID
Soluble	Analysis	300.0		1			3552	05/28/21 02:16	CH	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

Client Sample ID: SP-1 20'

Lab Sample ID: 880-2471-5
Matrix: Solid
Date Collected: 05/24/21 15:15
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 00:53	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 15:59	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3525	05/26/21 10:52	CH	XEN MID
Soluble	Analysis	300.0		1			3552	05/28/21 02:21	CH	XEN MID

Client Sample ID: SP-1 25'

Lab Sample ID: 880-2471-6
Matrix: Solid
Date Collected: 05/24/21 15:20
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 01:13	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 16:20	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3525	05/26/21 10:52	CH	XEN MID
Soluble	Analysis	300.0		1			3552	05/28/21 02:26	CH	XEN MID

Client Sample ID: SP-2 1'

Lab Sample ID: 880-2471-7
Matrix: Solid
Date Collected: 05/24/21 14:30
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 01:34	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 16:42	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	3525	05/26/21 10:52	CH	XEN MID
Soluble	Analysis	300.0		1			3552	05/28/21 02:31	CH	XEN MID

Client Sample ID: SP-2 5'

Lab Sample ID: 880-2471-8
Matrix: Solid
Date Collected: 05/24/21 14:32
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 01:54	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 17:03	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3525	05/26/21 10:52	CH	XEN MID
Soluble	Analysis	300.0		1			3552	05/28/21 02:35	CH	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

Client Sample ID: SP-2 10'

Lab Sample ID: 880-2471-9
Matrix: Solid
Date Collected: 05/24/21 14:35
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 02:14	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 17:25	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 21:33	CH	XEN MID

Client Sample ID: SP-2 15'

Lab Sample ID: 880-2471-10
Matrix: Solid
Date Collected: 05/24/21 14:37
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 02:35	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 17:46	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 21:47	CH	XEN MID

Client Sample ID: SP-2 20'

Lab Sample ID: 880-2471-11
Matrix: Solid
Date Collected: 05/24/21 14:40
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 03:56	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 18:29	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 21:52	CH	XEN MID

Client Sample ID: SP-2 25'

Lab Sample ID: 880-2471-12
Matrix: Solid
Date Collected: 05/24/21 14:46
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 04:17	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 18:50	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 21:57	CH	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

Client Sample ID: SP-3 1'

Lab Sample ID: 880-2471-13
Matrix: Solid
Date Collected: 05/24/21 14:10
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 04:37	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 19:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 22:02	CH	XEN MID

Client Sample ID: SP-3 5'

Lab Sample ID: 880-2471-14
Matrix: Solid
Date Collected: 05/24/21 14:12
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 04:57	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 19:33	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 22:07	CH	XEN MID

Client Sample ID: SP-3 10'

Lab Sample ID: 880-2471-15
Matrix: Solid
Date Collected: 05/24/21 14:15
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 05:18	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 20:16	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 22:12	CH	XEN MID

Client Sample ID: SP-3 15'

Lab Sample ID: 880-2471-16
Matrix: Solid
Date Collected: 05/24/21 14:18
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 05:38	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 19:55	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 22:26	CH	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

Client Sample ID: SP-3 20'

Lab Sample ID: 880-2471-17
Matrix: Solid
Date Collected: 05/24/21 14:21
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 05:59	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 20:37	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 22:31	CH	XEN MID

Client Sample ID: SP-3 25'

Lab Sample ID: 880-2471-18
Matrix: Solid
Date Collected: 05/24/21 14:25
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 06:19	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 20:59	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 22:46	CH	XEN MID

Client Sample ID: SP-4 1'

Lab Sample ID: 880-2471-19
Matrix: Solid
Date Collected: 05/24/21 13:35
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 06:40	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 21:21	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 22:51	CH	XEN MID

Client Sample ID: SP-4 5'

Lab Sample ID: 880-2471-20
Matrix: Solid
Date Collected: 05/24/21 13:37
Date Received: 05/26/21 08:47

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	3516	05/26/21 09:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3496	05/27/21 07:00	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3521	05/26/21 10:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3502	05/26/21 21:42	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 22:56	CH	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

Client Sample ID: SP-4 10'

Lab Sample ID: 880-2471-21
Matrix: Solid
Date Collected: 05/24/21 13:40
Date Received: 05/26/21 08:47

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	3517	05/26/21 09:40	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3497	05/26/21 23:44	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3527	05/26/21 10:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3504	05/26/21 13:49	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 23:01	CH	XEN MID

Client Sample ID: SP-4 15'

Lab Sample ID: 880-2471-22
Matrix: Solid
Date Collected: 05/24/21 13:45
Date Received: 05/26/21 08:47

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	3517	05/26/21 09:40	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3497	05/27/21 00:04	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3527	05/26/21 10:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3504	05/26/21 15:16	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 23:06	CH	XEN MID

Client Sample ID: SP-4 20'

Lab Sample ID: 880-2471-23
Matrix: Solid
Date Collected: 05/24/21 13:52
Date Received: 05/26/21 08:47

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	3517	05/26/21 09:40	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3497	05/27/21 00:25	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3527	05/26/21 10:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3504	05/26/21 15:37	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 23:11	CH	XEN MID

Client Sample ID: SP-4 25'

Lab Sample ID: 880-2471-24
Matrix: Solid
Date Collected: 05/24/21 13:57
Date Received: 05/26/21 08:47

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	3517	05/26/21 09:40	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3497	05/27/21 00:46	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3527	05/26/21 10:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3504	05/26/21 15:59	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3528	05/26/21 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			3578	05/27/21 23:15	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-2471-1
Project/Site: NMGSAU 1416

Laboratory: Eurofins Xenco, Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-2471-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
880-2471-1	SP-1 1'	Solid	05/24/21 15:00	05/26/21 08:47	
880-2471-2	SP-1 5'	Solid	05/24/21 15:03	05/26/21 08:47	
880-2471-3	SP-1 10'	Solid	05/24/21 15:05	05/26/21 08:47	
880-2471-4	SP-1 15'	Solid	05/24/21 15:10	05/26/21 08:47	
880-2471-5	SP-1 20'	Solid	05/24/21 15:15	05/26/21 08:47	
880-2471-6	SP-1 25'	Solid	05/24/21 15:20	05/26/21 08:47	
880-2471-7	SP-2 1'	Solid	05/24/21 14:30	05/26/21 08:47	
880-2471-8	SP-2 5'	Solid	05/24/21 14:32	05/26/21 08:47	
880-2471-9	SP-2 10'	Solid	05/24/21 14:35	05/26/21 08:47	
880-2471-10	SP-2 15'	Solid	05/24/21 14:37	05/26/21 08:47	
880-2471-11	SP-2 20'	Solid	05/24/21 14:40	05/26/21 08:47	
880-2471-12	SP-2 25'	Solid	05/24/21 14:46	05/26/21 08:47	
880-2471-13	SP-3 1'	Solid	05/24/21 14:10	05/26/21 08:47	
880-2471-14	SP-3 5'	Solid	05/24/21 14:12	05/26/21 08:47	
880-2471-15	SP-3 10'	Solid	05/24/21 14:15	05/26/21 08:47	
880-2471-16	SP-3 15'	Solid	05/24/21 14:18	05/26/21 08:47	
880-2471-17	SP-3 20'	Solid	05/24/21 14:21	05/26/21 08:47	
880-2471-18	SP-3 25'	Solid	05/24/21 14:25	05/26/21 08:47	
880-2471-19	SP-4 1'	Solid	05/24/21 13:35	05/26/21 08:47	
880-2471-20	SP-4 5'	Solid	05/24/21 13:37	05/26/21 08:47	
880-2471-21	SP-4 10'	Solid	05/24/21 13:40	05/26/21 08:47	
880-2471-22	SP-4 15'	Solid	05/24/21 13:45	05/26/21 08:47	
880-2471-23	SP-4 20'	Solid	05/24/21 13:52	05/26/21 08:47	
880-2471-24	SP-4 25'	Solid	05/24/21 13:57	05/26/21 08:47	

880-2471

484 STODY

880-2471 Chain of Custody

Larson & Associates, Inc.
Environmental Consultants
Data Reported to
432-687-0901

DATE: 5/25/2021 PAGE 1 OF 2
PO#: LAB WORK ORDER#:
PROJECT LOCATION OR NAME: NMGSAU 1416
LAI PROJECT #: 21-0119-01 COLLECTOR: DSG

TRRP report? ☐ Yes ☒ No
TIME ZONE Time zone/State: MST / NM
S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

Field Sample 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 ☐	TBLP - 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 NOTES
SP-1 1'		5/24/21	1500	S	1				X		X		X	X	X													X	# Direct Bill to Apache #
SP-1 5'			1503																										
SP-1 10'			1505																										
SP 1 15'			1510																										
SP-1 20'			1515																										
SP-1 25'			1520																										
SP-2 1'			1430																										
SP-2 5'			1432																										
SP-2 10'			1435																										
SP-2 15'			1437																										
SP-2 20'			1440																										
SP-2 25			1446																										
SP-3 1'			1416																										
SP-3 5'			1412																										
SP-3 10'			1415						AA																				
TOTAL 15																													

RELINQUISHED BY (Signature) DATE/TIME 5/26/21 8:47 RECEIVED BY (Signature) KGM
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 3.4/3.9 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Loc: 880
2471

№1485

-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to

DATE: 5/25/2021 PAGE 2 OF 2

PO#.

LAB WORK ORDER#:

PROJECT LOCATION OR NAME: NM 95AU 1416

LAI PROJECT #: 21-0119-01 COLLECTOR: DSG

TRRP report? ☐ Yes ☒ No

TIME ZONE
Time zone/State: 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 ☐ | TBLP - METALS (RCRA) ☐ | TCLP VOC ☐ | TCLP - PEST ☐ | HERB ☐ | TOTAL METALS (RCRA) ☐ | Semi-VOC ☐ | LEAD - TOTAL ☐ | D W 200.8 ☐ | OTHER LIST ☐ | RCI ☐ | TOX ☐ | TCLP ☐ | TDS ☐ | FLASHPOINT ☐ | TSS ☐ | % MOISTURE ☐ | pH ☐ | HEXAVALENT CHROMIUM ☐ | CYANIDE ☐ | 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	GASOLINE MOD 8015	DIESEL - MOD 8015	OIL - MOD 8015	VOC 8260	TCLP - METALS (RCRA)	TOTAL METALS (RCRA)	LEAD - TOTAL	RCI	TDS	pH	CHLORIDE	FIELD NOTES
SP-3 15'		5/24/21	1418	S	1				X		X		X	X	X								X	* Direct Bill to Apache *
SP-3 20'		"	1421																					
SP-3 25'			1425																					
SP-4 1'			1335																					
SP-4 5'			1337																					
SP-4 10'			1340																					
SP-4 15'			1345																					
SP-4 20'			1352																					
SP-4 25			1357																					

TOTAL 9

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
	5/26/21 8:07	
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 3.4 3.9 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL #
☒ HAND DELIVERED

Login Sample Receipt Checklist

Client: Larson & Associates, Inc. Job Number: 880-2471-1

Login Number: 2471 **List Source: Eurofins Xenco, Midland**
List Number: 1
Creator: Teel, Brianna

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

Laboratory Job ID: 880-2472-1
Client Project/Site: Apache - NMUSAU 1416

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

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
5/28/2021 5:10:39 PM

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

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Laboratory Job ID: 880-2472-1

Table of Contents

Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
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.

GC Semi VOA

Qualifier	Qualifier Description
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: Apache - NMUSAU 1416

Job ID: 880-2472-1

Job ID: 880-2472-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-2472-1

Comments
No additional comments.

Receipt
The samples were received on 5/26/2021 8:47 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 3.9º C.

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-3530 recovered above the upper control limit for Toluene 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 880-3530/20).

Method 8021B: Surrogate recovery for the following samples were outside control limits: Source 15' (880-2472-1), Source 20' (880-2472-2), Source 25' (880-2472-3) and Source 30' (880-2472-4). 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.

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

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

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

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

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2472-1
Project/Site: Apache - NMUSAU 1416

Client Sample ID: Source 15' Lab Sample ID: 880-2472-1

Date Collected: 05/24/21 13:00 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.101**		0.101		mg/Kg		05/26/21 12:00	05/26/21 18:28	50
Toluene	<0.101	U	0.101		mg/Kg		05/26/21 12:00	05/26/21 18:28	50
Ethylbenzene	**0.625**		0.101		mg/Kg		05/26/21 12:00	05/26/21 18:28	50
m-Xylene & p-Xylene	**0.575**		0.201		mg/Kg		05/26/21 12:00	05/26/21 18:28	50
o-Xylene	<0.101	U	0.101		mg/Kg		05/26/21 12:00	05/26/21 18:28	50
Xylenes, Total	**0.575**		0.201		mg/Kg		05/26/21 12:00	05/26/21 18:28	50
Total BTEX	**1.30**		0.201		mg/Kg		05/26/21 12:00	05/26/21 18:28	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*208*	*S1+*	*70 - 130*	*05/26/21 12:00*	*05/26/21 18:28*	*50*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*05/26/21 12:00*	*05/26/21 18:28*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**83.4**		49.8		mg/Kg		05/26/21 10:57	05/26/21 16:20	1
Diesel Range Organics (Over C10-C28)	**838**		49.8		mg/Kg		05/26/21 10:57	05/26/21 16:20	1
Oil Range Organics (Over C28-C36)	**111**		49.8		mg/Kg		05/26/21 10:57	05/26/21 16:20	1
Total TPH	**1030**		49.8		mg/Kg		05/26/21 10:57	05/26/21 16:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*23*	*S1-*	*70 - 130*	*05/26/21 10:57*	*05/26/21 16:20*	*1*
o-Terphenyl	*21*	*S1-*	*70 - 130*	*05/26/21 10:57*	*05/26/21 16:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**618**	**F1**	4.97		mg/Kg			05/26/21 13:30	1

Client Sample ID: Source 20' Lab Sample ID: 880-2472-2

Date Collected: 05/24/21 13:16 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.338**		0.0998		mg/Kg		05/26/21 12:00	05/26/21 18:54	50
Toluene	**0.392**		0.0998		mg/Kg		05/26/21 12:00	05/26/21 18:54	50
Ethylbenzene	**0.591**		0.0998		mg/Kg		05/26/21 12:00	05/26/21 18:54	50
m-Xylene & p-Xylene	**1.61**		0.200		mg/Kg		05/26/21 12:00	05/26/21 18:54	50
o-Xylene	**0.553**		0.0998		mg/Kg		05/26/21 12:00	05/26/21 18:54	50
Xylenes, Total	**2.16**		0.200		mg/Kg		05/26/21 12:00	05/26/21 18:54	50
Total BTEX	**3.48**		0.200		mg/Kg		05/26/21 12:00	05/26/21 18:54	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*	*05/26/21 12:00*	*05/26/21 18:54*	*50*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*05/26/21 12:00*	*05/26/21 18:54*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:57	05/26/21 16:42	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-2472-1
Project/Site: Apache - NMUSAU 1416

Client Sample ID: Source 20' Lab Sample ID: 880-2472-2

Date Collected: 05/24/21 13:16 **Matrix: Solid**
Date Received: 05/26/21 08:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	452		49.9		mg/Kg		05/26/21 10:57	05/26/21 16:42	1
Oil Range Organics (Over C28-C36)	59.1		49.9		mg/Kg		05/26/21 10:57	05/26/21 16:42	1
Total TPH	511		49.9		mg/Kg		05/26/21 10:57	05/26/21 16:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*21*	*S1-*	*70 - 130*	*05/26/21 10:57*	*05/26/21 16:42*	*1*
o-Terphenyl	*21*	*S1-*	*70 - 130*	*05/26/21 10:57*	*05/26/21 16:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	790		5.03		mg/Kg			05/26/21 13:57	1

Client Sample ID: Source 25' Lab Sample ID: 880-2472-3

Date Collected: 05/24/21 13:20 **Matrix: Solid**
Date Received: 05/26/21 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.278		0.0990		mg/Kg		05/26/21 12:00	05/26/21 19:19	50
Toluene	1.41		0.0990		mg/Kg		05/26/21 12:00	05/26/21 19:19	50
Ethylbenzene	0.267		0.0990		mg/Kg		05/26/21 12:00	05/26/21 19:19	50
m-Xylene & p-Xylene	0.697		0.198		mg/Kg		05/26/21 12:00	05/26/21 19:19	50
o-Xylene	0.641		0.0990		mg/Kg		05/26/21 12:00	05/26/21 19:19	50
Xylenes, Total	1.34		0.198		mg/Kg		05/26/21 12:00	05/26/21 19:19	50
Total BTEX	3.29		0.198		mg/Kg		05/26/21 12:00	05/26/21 19:19	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*240*	*S1+*	*70 - 130*	*05/26/21 12:00*	*05/26/21 19:19*	*50*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*05/26/21 12:00*	*05/26/21 19:19*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	73.9		50.0		mg/Kg		05/26/21 10:57	05/26/21 17:03	1
Diesel Range Organics (Over C10-C28)	634		50.0		mg/Kg		05/26/21 10:57	05/26/21 17:03	1
Oil Range Organics (Over C28-C36)	82.1		50.0		mg/Kg		05/26/21 10:57	05/26/21 17:03	1
Total TPH	790		50.0		mg/Kg		05/26/21 10:57	05/26/21 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*21*	*S1-*	*70 - 130*	*05/26/21 10:57*	*05/26/21 17:03*	*1*
o-Terphenyl	*21*	*S1-*	*70 - 130*	*05/26/21 10:57*	*05/26/21 17:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	788		5.02		mg/Kg			05/26/21 13:57	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

Client Sample ID: Source 30'

Date Collected: 05/24/21 09:16
Date Received: 05/26/21 08:47

Lab Sample ID: 880-2472-4

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.148**		0.0994		mg/Kg		05/26/21 12:00	05/26/21 19:45	50
Toluene	**0.775**		0.0994		mg/Kg		05/26/21 12:00	05/26/21 19:45	50
Ethylbenzene	<0.0994	U	0.0994		mg/Kg		05/26/21 12:00	05/26/21 19:45	50
m-Xylene & p-Xylene	**0.975**		0.199		mg/Kg		05/26/21 12:00	05/26/21 19:45	50
o-Xylene	**0.171**		0.0994		mg/Kg		05/26/21 12:00	05/26/21 19:45	50
Xylenes, Total	**1.15**		0.199		mg/Kg		05/26/21 12:00	05/26/21 19:45	50
Total BTEX	**2.07**		0.199		mg/Kg		05/26/21 12:00	05/26/21 19:45	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*146*	*S1+*	*70 - 130*	*05/26/21 12:00*	*05/26/21 19:45*	*50*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*05/26/21 12:00*	*05/26/21 19:45*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/26/21 10:57	05/26/21 17:25	1
Diesel Range Organics (Over C10-C28)	**590**		49.9		mg/Kg		05/26/21 10:57	05/26/21 17:25	1
Oil Range Organics (Over C28-C36)	**72.2**		49.9		mg/Kg		05/26/21 10:57	05/26/21 17:25	1
Total TPH	**662**		49.9		mg/Kg		05/26/21 10:57	05/26/21 17:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/26/21 10:57*	*05/26/21 17:25*	*1*
o-Terphenyl	*97*		*70 - 130*	*05/26/21 10:57*	*05/26/21 17:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**288**		5.05		mg/Kg			05/26/21 14:02	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

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)
880-2472-1	Source 15'	208 S1+	70
880-2472-2	Source 20'	144 S1+	71
880-2472-3	Source 25'	240 S1+	72
880-2472-4	Source 30'	146 S1+	76
890-730-A-1-B MS	Matrix Spike	60 S1-	95
890-730-A-1-C MSD	Matrix Spike Duplicate	62 S1-	95
LCS 880-3520/1-A	Lab Control Sample	108	98
LCS 880-3520/2-A	Lab Control Sample	103	95
MB 880-3520/5-A	Method Blank	70	82

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)
880-2471-A-21-F MS	Matrix Spike	78	75
880-2471-A-21-G MSD	Matrix Spike Duplicate	95	90
880-2472-1	Source 15'	23 S1-	21 S1-
880-2472-2	Source 20'	21 S1-	21 S1-
880-2472-3	Source 25'	21 S1-	21 S1-
880-2472-4	Source 30'	95	97
LCS 880-3527/2-A	Lab Control Sample	100	95
LCSD 880-3527/3-A	Lab Control Sample Dup	101	96
MB 880-3527/1-A	Method Blank	100	103

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3520/5-A
Matrix: Solid
Analysis Batch: 3530

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3520

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/26/21 12:00	05/26/21 15:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/26/21 12:00	05/26/21 15:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/26/21 12:00	05/26/21 15:31	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/26/21 12:00	05/26/21 15:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/26/21 12:00	05/26/21 15:31	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/26/21 12:00	05/26/21 15:31	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/26/21 12:00	05/26/21 15:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*05/26/21 12:00*	*05/26/21 15:31*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*05/26/21 12:00*	*05/26/21 15:31*	*1*

Lab Sample ID: LCS 880-3520/1-A
Matrix: Solid
Analysis Batch: 3530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3520

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1159		mg/Kg		116	70 - 130		
Toluene			0.100	0.09439		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.1041		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2101		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1016		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCS 880-3520/2-A
Matrix: Solid
Analysis Batch: 3530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3520

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1131		mg/Kg		113	70 - 130		
Toluene			0.100	0.09802		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.1016		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.2052		mg/Kg		103	70 - 130		
o-Xylene			0.100	0.1001		mg/Kg		100	70 - 130		

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

Lab Sample ID: 890-730-A-1-B MS
Matrix: Solid
Analysis Batch: 3530

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 3520

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U F1	0.100	0.07893		mg/Kg		79	70 - 130		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

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

Lab Sample ID: 890-730-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3530 — **Prep Batch: 3520**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00199	U F1	0.100	0.06278	F1	mg/Kg		63	70 - 130
Ethylbenzene	<0.00199	U F1	0.100	0.05543	F1	mg/Kg		55	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1111	F1	mg/Kg		55	70 - 130
o-Xylene	<0.00199	U F1	0.100	0.05683	F1	mg/Kg		56	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*60*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 890-730-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3530 — **Prep Batch: 3520**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.0998	0.06735	F1	mg/Kg		67	70 - 130	16	35
Toluene	<0.00199	U F1	0.0998	<0.00200	U F1	mg/Kg		0	70 - 130	NC	35
Ethylbenzene	<0.00199	U F1	0.0998	0.04920	F1	mg/Kg		49	70 - 130	12	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.09888	F1	mg/Kg		50	70 - 130	12	35
o-Xylene	<0.00199	U F1	0.0998	0.05191	F1	mg/Kg		52	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*62*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

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

Lab Sample ID: MB 880-3527/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3504 — **Prep Batch: 3527**

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		05/26/21 10:57	05/26/21 12:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/26/21 10:57	05/26/21 12:45	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/26/21 10:57	05/26/21 12:45	1
Total TPH	<50.0	U	50.0	mg/Kg		05/26/21 10:57	05/26/21 12:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*05/26/21 10:57*	*05/26/21 12:45*	*1*
o-Terphenyl	*103*		*70 - 130*	*05/26/21 10:57*	*05/26/21 12:45*	*1*

Lab Sample ID: LCS 880-3527/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3504 — **Prep Batch: 3527**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1073		mg/Kg		107	70 - 130

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

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

Lab Sample ID: LCS 880-3527/2-A
Matrix: Solid
Analysis Batch: 3504

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3527

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (Over C10-C28)			1000	1174		mg/Kg		117	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: LCSD 880-3527/3-A
Matrix: Solid
Analysis Batch: 3504

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3527

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	967.4		mg/Kg		97	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1193		mg/Kg		119	70 - 130	2	20

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

Lab Sample ID: 880-2471-A-21-F MS
Matrix: Solid
Analysis Batch: 3504

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 3527

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	996	762.1		mg/Kg		77	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	891.6		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*78*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

Lab Sample ID: 880-2471-A-21-G MSD
Matrix: Solid
Analysis Batch: 3504

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 3527

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	996	925.9		mg/Kg		93	70 - 130	19	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1071		mg/Kg		108	70 - 130	18	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*90*		*70 - 130*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3519/1-A
Matrix: Solid
Analysis Batch: 3522

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			05/26/21 13:14	1

Lab Sample ID: LCS 880-3519/2-A
Matrix: Solid
Analysis Batch: 3522

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	242.4		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-3519/3-A
Matrix: Solid
Analysis Batch: 3522

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	241.4		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 880-2472-1 MS
Matrix: Solid
Analysis Batch: 3522

Client Sample ID: Source 15'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	618	F1	249	832.7	F1	mg/Kg		86	90 - 110		

Lab Sample ID: 880-2472-1 MSD
Matrix: Solid
Analysis Batch: 3522

Client Sample ID: Source 15'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	618	F1	249	832.7	F1	mg/Kg		86	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

GC VOA

Prep Batch: 3520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2472-1	Source 15'	Total/NA	Solid	5035	
880-2472-2	Source 20'	Total/NA	Solid	5035	
880-2472-3	Source 25'	Total/NA	Solid	5035	
880-2472-4	Source 30'	Total/NA	Solid	5035	
MB 880-3520/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3520/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 880-3520/2-A	Lab Control Sample	Total/NA	Solid	5035	
890-730-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-730-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 3530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2472-1	Source 15'	Total/NA	Solid	8021B	3520
880-2472-2	Source 20'	Total/NA	Solid	8021B	3520
880-2472-3	Source 25'	Total/NA	Solid	8021B	3520
880-2472-4	Source 30'	Total/NA	Solid	8021B	3520
MB 880-3520/5-A	Method Blank	Total/NA	Solid	8021B	3520
LCS 880-3520/1-A	Lab Control Sample	Total/NA	Solid	8021B	3520
LCS 880-3520/2-A	Lab Control Sample	Total/NA	Solid	8021B	3520
890-730-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	3520
890-730-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	3520

GC Semi VOA

Analysis Batch: 3504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2472-1	Source 15'	Total/NA	Solid	8015B NM	3527
880-2472-2	Source 20'	Total/NA	Solid	8015B NM	3527
880-2472-3	Source 25'	Total/NA	Solid	8015B NM	3527
880-2472-4	Source 30'	Total/NA	Solid	8015B NM	3527
MB 880-3527/1-A	Method Blank	Total/NA	Solid	8015B NM	3527
LCS 880-3527/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3527
LCSD 880-3527/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3527
880-2471-A-21-F MS	Matrix Spike	Total/NA	Solid	8015B NM	3527
880-2471-A-21-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	3527

Prep Batch: 3527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2472-1	Source 15'	Total/NA	Solid	8015NM Prep	
880-2472-2	Source 20'	Total/NA	Solid	8015NM Prep	
880-2472-3	Source 25'	Total/NA	Solid	8015NM Prep	
880-2472-4	Source 30'	Total/NA	Solid	8015NM Prep	
MB 880-3527/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3527/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3527/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-2471-A-21-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-2471-A-21-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

HPLC/IC

Leach Batch: 3519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2472-1	Source 15'	Soluble	Solid	DI Leach	
880-2472-2	Source 20'	Soluble	Solid	DI Leach	
880-2472-3	Source 25'	Soluble	Solid	DI Leach	
880-2472-4	Source 30'	Soluble	Solid	DI Leach	
MB 880-3519/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3519/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3519/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-2472-1 MS	Source 15'	Soluble	Solid	DI Leach	
880-2472-1 MSD	Source 15'	Soluble	Solid	DI Leach	

Analysis Batch: 3522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2472-1	Source 15'	Soluble	Solid	300.0	3519
880-2472-2	Source 20'	Soluble	Solid	300.0	3519
880-2472-3	Source 25'	Soluble	Solid	300.0	3519
880-2472-4	Source 30'	Soluble	Solid	300.0	3519
MB 880-3519/1-A	Method Blank	Soluble	Solid	300.0	3519
LCS 880-3519/2-A	Lab Control Sample	Soluble	Solid	300.0	3519
LCSD 880-3519/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3519
880-2472-1 MS	Source 15'	Soluble	Solid	300.0	3519
880-2472-1 MSD	Source 15'	Soluble	Solid	300.0	3519

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

Client Sample ID: Source 15'
Date Collected: 05/24/21 13:00
Date Received: 05/26/21 08:47

Lab Sample ID: 880-2472-1
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			4.97 g	5 mL	3520	05/26/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	3530	05/26/21 18:28	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3527	05/26/21 10:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3504	05/26/21 16:20	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3519	05/26/21 10:04	SC	XEN MID
Soluble	Analysis	300.0		1			3522	05/26/21 13:30	CH	XEN MID

Client Sample ID: Source 20'
Date Collected: 05/24/21 13:16
Date Received: 05/26/21 08:47

Lab Sample ID: 880-2472-2
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	3520	05/26/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	3530	05/26/21 18:54	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3527	05/26/21 10:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3504	05/26/21 16:42	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	3519	05/26/21 10:04	SC	XEN MID
Soluble	Analysis	300.0		1			3522	05/26/21 13:57	CH	XEN MID

Client Sample ID: Source 25'
Date Collected: 05/24/21 13:20
Date Received: 05/26/21 08:47

Lab Sample ID: 880-2472-3
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			5.05 g	5 mL	3520	05/26/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	3530	05/26/21 19:19	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3527	05/26/21 10:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3504	05/26/21 17:03	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	3519	05/26/21 10:04	SC	XEN MID
Soluble	Analysis	300.0		1			3522	05/26/21 13:57	CH	XEN MID

Client Sample ID: Source 30'
Date Collected: 05/24/21 09:16
Date Received: 05/26/21 08:47

Lab Sample ID: 880-2472-4
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	3520	05/26/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	3530	05/26/21 19:45	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3527	05/26/21 10:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3504	05/26/21 17:25	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3519	05/26/21 10:04	SC	XEN MID
Soluble	Analysis	300.0		1			3522	05/26/21 14:02	CH	XEN MID

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-2472-1
Project/Site: Apache - NMUSAU 1416

Laboratory: Eurofins Xenco, Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Apache - NMUSAU 1416

Job ID: 880-2472-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
880-2472-1	Source 15'	Solid	05/24/21 13:00	05/26/21 08:47	
880-2472-2	Source 20'	Solid	05/24/21 13:16	05/26/21 08:47	
880-2472-3	Source 25'	Solid	05/24/21 13:20	05/26/21 08:47	
880-2472-4	Source 30'	Solid	05/24/21 09:16	05/26/21 08:47	

880-2472 №1483

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

Data Reported to

Ste. 200
Midland, TX 79701
432-687-0901

Date: 5/25/2021 PAGE 1 OF 1

PO#. _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: NMGSAU 1416

LAI PROJECT #. 21-0119-01 COLLECTOR DSG

TRRP report? ☐ Yes ☒ No

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE 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 ☐	TBLP - 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 NOTES
~~Source~~ Source 15		5/24/21	1300	S	1				X		X		X	X	X												X		* Direct Bill to Apache *
Source 20'		5/24/21	1316	S	↓				↓		↓		↓	↓	↓												↓		
Source 25'		5/24/21	1320	S	↓				↓		↓		↓	↓	↓												↓		
Source 30'		5/25/21	0916	S	↓				↓		↓		↓	↓	↓												↓		

TOTAL 4

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
[signature]	5/26/21 8:47	[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 ☒
Rush

LABORATORY USE ONLY:
RECEIVING TEMP 3.4/3.9 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

92

Login Sample Receipt Checklist

Client: Larson & Associates, Inc. Job Number: 880-2472-1

Login Number: 2472 **List Source: Eurofins Xenco, Midland**
List Number: 1
Creator: Phillips, Kerianna

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	

END OF REPORT

Table 2
Groundwater Sample Organic and Inorganic Analytical Data Summary
Apache Corporation, NMGSAU 1416
Lea County, New Mexico

Well No.	Collection Date	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Xylenes (mg/L)	C6 -C10 (mg/L)	>C10-C28 (mg/L)	>C28-C35 (mg/L)	C6-C35 (mg/L)	Chloride (mg/L)	TDS (mg/L)
WQCC Standard:		***0.01**	***0.75**	***0.75**	***0.62**	**--**	**--**	**--**	**--**	****250**	****1,000**
MW-1	12/21/2021	<0.200	0.391	0.221	<0.400	1,350	2,210	<459	3,560	**1,710**	--

Notes: Analysis performed by Eurofins - Xenco (Xenco) Laboratories, Midland, Texas, by EPA SW-846 Method 8021B (BTEX), Method 8015M (TPH) and Method 300 (chloride)
All values reported in milligrams per liter (mg/L) equivelent to parts per million (ppm)
-- No data available
< values - denootes concentration is less than method reporting limit (RL).
* - Human health standard
** - Domestic water quality standard
Bold and highlighted denotes analyte concentration exceeds NMWQCC domestic water quality standard

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-9659-1
Client Project/Site: NMGSAU 1416

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

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
1/5/2022 8:47:48 AM

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

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Laboratory Job ID: 880-9659-1

Table of Contents

Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-9659-1
Project/Site: NMGSAU 1416

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-9659-1

Job ID: 880-9659-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-9659-1

Receipt
The sample was received on 12/22/2021 3:50 PM. 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 time was 7.7°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 880-15649 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: MW-1 (880-9659-1) and (880-9698-B-1). 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
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: NMGSAU 1416

Job ID: 880-9659-1

Client Sample ID: MW-1
Date Collected: 12/21/21 12:33
Date Received: 12/22/21 15:50

Lab Sample ID: 880-9659-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.200	U	0.200		mg/L			12/29/21 07:35	100
Toluene	**0.221**		0.200		mg/L			12/29/21 07:35	100
Ethylbenzene	**0.391**		0.200		mg/L			12/29/21 07:35	100
m,p-Xylenes	<0.400	U	0.400		mg/L			12/29/21 07:35	100
o-Xylene	<0.200	U	0.200		mg/L			12/29/21 07:35	100
Xylenes, Total	<0.400	U	0.400		mg/L			12/29/21 07:35	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*12/29/21 07:35*	*100*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*		*12/29/21 07:35*	*100*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.612**		0.400		mg/L			12/30/21 10:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**3560**		459		mg/L			01/04/22 15:21	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	**1350**		459		mg/L		01/03/22 14:39	01/04/22 01:17	100
Diesel Range Organics (Over C10-C28)	**2210**		459		mg/L		01/03/22 14:39	01/04/22 01:17	100
Oil Range Organics (Over C28-C36)	<459	U	459		mg/L		01/03/22 14:39	01/04/22 01:17	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*0*	*S1-*	*70 - 130*	*01/03/22 14:39*	*01/04/22 01:17*	*100*
o-Terphenyl	*123*		*70 - 130*	*01/03/22 14:39*	*01/04/22 01:17*	*100*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1710**		25.0		mg/L			12/30/21 15:56	50

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-9659-1

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-9659-1	MW-1	108	78
880-9698-B-1 MS	Matrix Spike	125	71
880-9698-B-1 MSD	Matrix Spike Duplicate	118	92
LCS 880-15649/34	Lab Control Sample	130	70
LCSD 880-15649/35	Lab Control Sample Dup	129	71
MB 880-15649/39	Method Blank	100	64 S1-
MB 880-15650/5-A	Method Blank	108	60 S1-

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-9659-1	MW-1	0 S1-	123

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO2	OTPH2
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
LCS 880-15919/2-A	Lab Control Sample	102	93
LCSD 880-15919/3-A	Lab Control Sample Dup	109	100
MB 880-15919/1-A	Method Blank	120	126

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-9659-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-15649/39
Matrix: Water
Analysis Batch: 15649

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/L			12/29/21 06:40	1
Toluene	<0.00200	U	0.00200		mg/L			12/29/21 06:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/29/21 06:40	1
m,p-Xylenes	<0.00400	U	0.00400		mg/L			12/29/21 06:40	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/29/21 06:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/29/21 06:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*12/29/21 06:40*	*1*
1,4-Difluorobenzene (Surr)	*64*	*S1-*	*70 - 130*		*12/29/21 06:40*	*1*

Lab Sample ID: LCS 880-15649/34
Matrix: Water
Analysis Batch: 15649

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.07587		mg/L		76	70 - 130		
Toluene			0.100	0.08056		mg/L		81	70 - 130		
Ethylbenzene			0.100	0.07723		mg/L		77	70 - 130		
m,p-Xylenes			0.200	0.1542		mg/L		77	70 - 130		
o-Xylene			0.100	0.07294		mg/L		73	70 - 130		

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

Lab Sample ID: LCSD 880-15649/35
Matrix: Water
Analysis Batch: 15649

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07470		mg/L		75	70 - 130	2	20
Toluene			0.100	0.08077		mg/L		81	70 - 130	0	20
Ethylbenzene			0.100	0.08063		mg/L		81	70 - 130	4	20
m,p-Xylenes			0.200	0.1579		mg/L		79	70 - 130	2	20
o-Xylene			0.100	0.08143		mg/L		81	70 - 130	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*

Lab Sample ID: 880-9698-B-1 MS
Matrix: Water
Analysis Batch: 15649

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	0.00223	F1 F2	0.100	0.06449	F1	mg/L		62	70 - 130		
Toluene	0.0252	F1 F2	0.100	0.08513	F1	mg/L		60	70 - 130		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-9659-1

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

Lab Sample ID: 880-9698-B-1 MS
Matrix: Water
Analysis Batch: 15649

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	0.00902	F1 F2	0.100	0.07678	F1	mg/L		68	70 - 130
m,p-Xylenes	0.0668	F1	0.200	0.1957	F1	mg/L		64	70 - 130
o-Xylene	0.00311	F1	0.100	0.07003	F1	mg/L		67	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*

Lab Sample ID: 880-9698-B-1 MSD
Matrix: Water
Analysis Batch: 15649

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.00223	F1 F2	0.100	0.08628	F2	mg/L		84	70 - 130	29	25
Toluene	0.0252	F1 F2	0.100	0.1488	F2	mg/L		124	70 - 130	54	25
Ethylbenzene	0.00902	F1 F2	0.100	0.1839	F1 F2	mg/L		175	70 - 130	82	25
m,p-Xylenes	0.0668	F1	0.200	0.2512		mg/L		92	70 - 130	25	25
o-Xylene	0.00311	F1	0.100	0.08910		mg/L		86	70 - 130	24	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: MB 880-15650/5-A
Matrix: Water
Analysis Batch: 15649

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15650

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/L		12/28/21 12:49	12/28/21 16:34	1
Toluene	<0.00200	U	0.00200	mg/L		12/28/21 12:49	12/28/21 16:34	1
Ethylbenzene	<0.00200	U	0.00200	mg/L		12/28/21 12:49	12/28/21 16:34	1
m,p-Xylenes	<0.00400	U	0.00400	mg/L		12/28/21 12:49	12/28/21 16:34	1
o-Xylene	<0.00200	U	0.00200	mg/L		12/28/21 12:49	12/28/21 16:34	1
Xylenes, Total	<0.00400	U	0.00400	mg/L		12/28/21 12:49	12/28/21 16:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*12/28/21 12:49*	*12/28/21 16:34*	*1*
1,4-Difluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*12/28/21 12:49*	*12/28/21 16:34*	*1*

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

Lab Sample ID: MB 880-15919/1-A
Matrix: Water
Analysis Batch: 15869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15919

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<4.57	U	4.57	mg/L		01/03/22 14:39	01/03/22 23:35	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-9659-1

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

Lab Sample ID: MB 880-15919/1-A
Matrix: Water
Analysis Batch: 15869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15919

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<4.57	U	4.57		mg/L		01/03/22 14:39	01/03/22 23:35	1
Oil Range Organics (Over C28-C36)	<4.57	U	4.57		mg/L		01/03/22 14:39	01/03/22 23:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*01/03/22 14:39*	*01/03/22 23:35*	*1*
o-Terphenyl	*126*		*70 - 130*	*01/03/22 14:39*	*01/03/22 23:35*	*1*

Lab Sample ID: LCS 880-15919/2-A
Matrix: Water
Analysis Batch: 15869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15919

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			91.7	87.97		mg/L		96	75 - 125		
Diesel Range Organics (Over C10-C28)			91.7	92.37		mg/L		101	75 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: LCSD 880-15919/3-A
Matrix: Water
Analysis Batch: 15869

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 15919

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			92.0	87.57		mg/L		95	75 - 125	0	20
Diesel Range Organics (Over C10-C28)			92.0	90.57		mg/L		98	75 - 125	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*109*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-15806/3
Matrix: Water
Analysis Batch: 15806

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500		mg/L			12/30/21 12:24	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-9659-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-15806/4
Matrix: Water
Analysis Batch: 15806

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			25.0	24.54		mg/L		98	90 - 110		

Lab Sample ID: LCSD 880-15806/5
Matrix: Water
Analysis Batch: 15806

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			25.0	24.59		mg/L		98	90 - 110	0	20

Lab Sample ID: 880-9657-B-3 MS
Matrix: Water
Analysis Batch: 15806

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	284		250	535.7		mg/L		101	90 - 110		

Lab Sample ID: 880-9657-B-3 MSD
Matrix: Water
Analysis Batch: 15806

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	284		250	532.8		mg/L		100	90 - 110	1	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-9659-1

GC VOA

Analysis Batch: 15649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9659-1	MW-1	Total/NA	Water	8021B	
MB 880-15649/39	Method Blank	Total/NA	Water	8021B	
MB 880-15650/5-A	Method Blank	Total/NA	Water	8021B	15650
LCS 880-15649/34	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-15649/35	Lab Control Sample Dup	Total/NA	Water	8021B	
880-9698-B-1 MS	Matrix Spike	Total/NA	Water	8021B	
880-9698-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Prep Batch: 15650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-15650/5-A	Method Blank	Total/NA	Water	5035	

Analysis Batch: 15797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9659-1	MW-1	Total/NA	Water	Total BTEX	

GC Semi VOA

Analysis Batch: 15869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9659-1	MW-1	Total/NA	Water	8015B NM	15919
MB 880-15919/1-A	Method Blank	Total/NA	Water	8015B NM	15919
LCS 880-15919/2-A	Lab Control Sample	Total/NA	Water	8015B NM	15919
LCSD 880-15919/3-A	Lab Control Sample Dup	Total/NA	Water	8015B NM	15919

Analysis Batch: 15912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9659-1	MW-1	Total/NA	Water	8015 NM	

Prep Batch: 15919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9659-1	MW-1	Total/NA	Water	8015NM Aq Prep	
MB 880-15919/1-A	Method Blank	Total/NA	Water	8015NM Aq Prep	
LCS 880-15919/2-A	Lab Control Sample	Total/NA	Water	8015NM Aq Prep	
LCSD 880-15919/3-A	Lab Control Sample Dup	Total/NA	Water	8015NM Aq Prep	

HPLC/IC

Analysis Batch: 15806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9659-1	MW-1	Total/NA	Water	300.0	
MB 880-15806/3	Method Blank	Total/NA	Water	300.0	
LCS 880-15806/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-15806/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-9657-B-3 MS	Matrix Spike	Total/NA	Water	300.0	
880-9657-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-9659-1

Client Sample ID: MW-1
Date Collected: 12/21/21 12:33
Date Received: 12/22/21 15:50

Lab Sample ID: 880-9659-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		100	5 mL	5 mL	15649	12/29/21 07:35	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15797	12/30/21 10:20	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			15912	01/04/22 15:21	AJ	XEN MID
Total/NA	Prep	8015NM Aq Prep			32.7 mL	3 mL	15919	01/03/22 14:39	DM	XEN MID
Total/NA	Analysis	8015B NM		100			15869	01/04/22 01:17	AJ	XEN MID
Total/NA	Analysis	300.0		50			15806	12/30/21 15:56	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-9659-1
Project/Site: NMGSAU 1416

Laboratory: Eurofins Xenco, Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

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

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

Method Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-9659-1

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
5030B	Purge and Trap	SW846	XEN MID
8015NM Aq Prep	Microextraction	SW846	XEN MID

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 1416

Job ID: 880-9659-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-9659-1	MW-1	Water	12/21/21 12:33	12/22/21 15:50

No. 2299

96059 CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

507 N Marienfeld Ste 202
Midland TX 79701
432-687 0901

Data Reported to

DATE 12/22/2021 PAGE 1 OF 1
PO#: LAB WORK ORDER#
PROJECT LOCATION OR NAME NMGSAU 1416
LAI PROJECT # 21-0119-01 COLLECTOR DSG & JR

TRRP report? ☐ Yes ☒ No

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

TIME ZONE
Time zone/State
MST/MDT

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX 8021 ☐ 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 ☐ DW 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
MW-1		12/21/21	1233	W	2				X		X		X	X	X												X		X			Direct Bill to Apache
TOTAL																																

880-9659 Chain of Custody

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
	12/22/21 1550	
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 7.6/7.7 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☒ HAND DELIVERED

Login Sample Receipt Checklist

Client: Larson & Associates, Inc. Job Number: 880-9659-1

Login Number: 9659 **List Source: Eurofins Xenco, Midland**
List Number: 1
Creator: Teel, Brianna

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").	True	

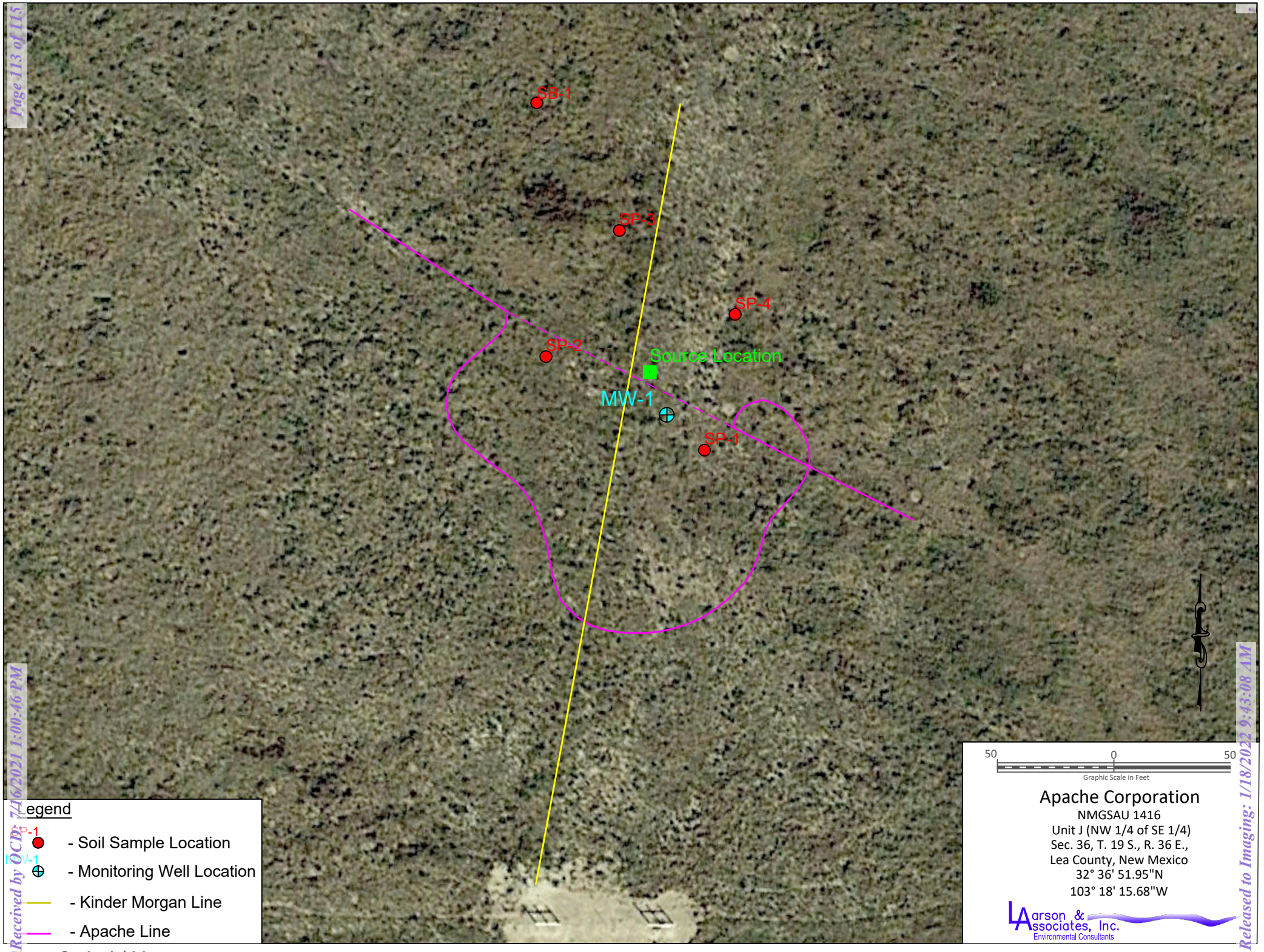

Figure 2 - Aerial Map

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

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

COMMENTS

Action 36698

COMMENTS

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 36698
	Action Type: [C-141] Release Corrective Action (C-141)

COMMENTS

Created By	Comment	Comment Date
chensley	Get with Bradford, contamination reach DTW.	8/20/2021
chensley	Spoke with Larry Barker and requested a MW at the source. Requested water sample before continuing.	8/25/2021

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CONDITIONS

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CONDITIONS

Created By	Condition	Condition Date
chensley	The OCD request samples as near as possible to (no greater than 5ft) source starting with samples (full panel per rule part 29) at 1ft, 3ft, 5ft, 10ft, 15ft, 20ft, 25ft, 30ft, 35ft, 40ft. If MW at source has been backfilled use this new bore hole as a standard monitoring well.	1/18/2022
chensley	Move MW #2 southwest by 30 feet as per MW2 current proposed location on map.	1/18/2022
chensley	Water samples must identify levels at standard minimally for WQCC. Example Benzene is now 5 ppb.	1/18/2022
chensley	The OCD request the lab utilize the chromatographic to identify specific chemistry of heavy and and carbon chains if possible.	1/18/2022