Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2109642047
District RP	
Facility ID	30-005-29137
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?	>55 (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	nAPP2109642047
District RP	
Facility ID	30-005-29137
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: Blake Morphew

Title: managing member

Signature: _____

Date: 06/16/2022

email: blake@bampermian.com

Telephone: 432-242-8851

OCD Only

Received by: _____

Date: _____

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2109642047
District RP	Jennifer Nobui
Facility ID	30-005-29137
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 site map 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: Blake Morphew
Title: managing member

Signature: _____
Date: 06/16/2022

email: blake@bampermian.com
Telephone: 432-242-8851

OCD Only

Received by: _____ Date: _____

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

Signature: Jennifer Nobui
Date: 07/01/2022

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TALON LPE

Remediation Work Plan

Perseus Central Battery
Chaves County, New Mexico
API ID # 30-005-29137
Incident # nAPP2109642047

Prepared For:

BAM Permian Operating, LLC
4416 Briarwood Ave, Suite 110 PMB #53
Midland, Texas 79707

Prepared By:

Talon/LPE
408 W. Texas Avenue
Artesia, New Mexico 88210

June 16, 2022

Mr. Mike Bratcher
NMOCD District 2
811 S. First St.
Artesia, NM 88210

Mr. Jim Amos
Bureau of Land Management
620 East Green Street
Carlsbad, NM 88220

Subject: **Remediation Work Plan**
Perseus Central Battery
Chaves County, New Mexico
API ID # 30-005-29137
Incident # nAPP2109642047

Dear Mr. Bratcher and Mr. Amos,

BAM Permian Operating, LLC contracted Talon/LPE (Talon) to perform site assessment activities at the above referenced location. The results of the site characterization and the remediation work plan are provided herein.

Site Information

The Perseus Central Battery is located approximately 12.25 miles northwest of Maljamar, New Mexico. The legal location for this release is Unit Letter H, Section 10, Township 15 South and Range 31 East in Chaves County, New Mexico. The latitude and longitude for the site is 33.03190 and -103.80110. Site maps are presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soils in the area are made up of Kimbrough-Stegall-Slaughter complex with 0 to 3 percent slopes, comprised of gravelly sandy loam. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology consists of alluvial and eolian deposits of the Ogallala Formation, lower Pliocene to middle Miocene in age. Drainage courses in this area are typically well drained.

Groundwater and Site Characterization

Based on New Mexico Office of the State Engineer Database, the nearest reported groundwater depth is 264 feet below ground surface (bgs) but is located greater than 0.5 miles from the subject site. On May 6, 2022, a temporary well was drilled to a depth of 55 feet bgs on the northern side of the pad to conclusively determine the presence or absence of groundwater at that depth. See Appendix II for the boring log. Groundwater was not encountered at 55 feet bgs following a 72-hour period after the installation of a temporary well. The FEMA Flood Map Service Center does not locate the site in a 100-year flood plain. Further research of the Bureau of Land Management Karst, the site is located in a non-karst area. See Appendix II for the site characterization data.

If a release occurs within the following areas, the responsible party must treat the release as if it occurred in an area where the groundwater is less than 50 feet bgs in Table I, New Mexico Oil Conservation Division (NMOCD) Rule 19.15.29 NMAC.

Approximate Depth to Groundwater	**> 55 feet/bgs**
☐Yes ☒No	Within 300 feet of any continuously flowing watercourse or any other significant watercourse
☐Yes ☒No	Within 200 feet of any lakebed, sinkhole or a playa lake
☐Yes ☒No	Within 300 feet from an occupied permanent residence, school, hospital, institution or church
☐Yes ☒No	Within 500 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	Within 1000 feet of any freshwater well or spring
☐Yes ☒No	Within incorporated municipal boundaries or within a defined municipal freshwater well field covered under a municipal ordinance adopted pursuant to Section 3-2703 NMSA 1978
☐Yes ☒No	Within 300 feet of a wetland
☐Yes ☒No	Within the area overlying a subsurface mine
☐Yes ☒No	Within an unstable area
☐Yes ☒No	Within a 100-year floodplain

Because the release occurred in a production area (well pad) and the verified depth to groundwater on location is greater than 55 feet bgs, the clean up criteria for this site is as follows.

Table I
Closure Criteria for Soils Impacted by a Release

Depth below horizontal extents of release to ground water less than 10,000 mg/l TDS	Constituent	Method	Limit
50-100 feet	Total Chlorides	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	TPH (GRO/DRO)	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

Incident Description

On March 27, 2021, approximately 20.64 barrels (bbls) of crude oil was discharged onto the well pad due to a failed gasket on the heater treater fire tube. A vacuum truck was dispatched and 20 bbls of crude oil was recovered from inside the berm containment. The release was reported to the NMOCD and was assigned incident # nAPP2109642047.

Site maps of the release are presented in Appendix I. Initial C-141 spill notifications were filed with the NMOCD and are attached in Appendix III.

Site Assessment Activities

On May 11, 2021, soil samples were collected from 0-1 feet bgs from the site at nine (9) locations. Additional soil samples were collected on October 13, 2021 to assist with vertical delineation in the areas of S-1, S-2, S-3, and S-8. All samples were transported via chain of custody to Eurofins Laboratories, Inc., for analysis of Total Chlorides (EPA Method 300.0), Total Petroleum Hydrocarbons (TPH, EPA Method 8015B NM) and Volatile Organics (BTEX, EPA Method 8021B).

On December 7, 2021, the boring at S-8 was advanced to 20 feet bgs for vertical chloride delineation. The samples were transported via chain of custody to Eurofins Laboratories, Inc., for analysis of Total Chlorides (EPA Method 300.0).

The soil assessment was completed by Larson & Associates, Inc. Results from the initial sampling event are presented on the following data table and the complete laboratory report and site characterization data provided by Larson & Associates, Inc., can be found in Appendix V. Sample locations are shown on the attached Figure 1 in Appendix I.

Table I

Soil Assessment Laboratory Results

Sample ID	Sample Date	Depth (bgs)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Chlorides mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	DRO + GRO combined = 1,000 mg/kg			2,500 mg/kg	10,000 mg/kg
S-1	5/11/2021	0.5'	ND	ND	ND	ND	ND	ND	11600
S-1	5/11/2021	1.0'	ND	ND	ND	116	ND	116	4150
S-1	10/13/2021	1.0'	ND	ND	ND	ND	ND	ND	426
S-1	10/13/2021	3.0'	ND	ND	ND	ND	ND	ND	526
S-1	10/13/2021	5.0'	ND	ND	ND	ND	ND	ND	332
S-1	10/13/2021	8.0'	ND	ND	ND	ND	ND	ND	333
S-2	5/11/2021	0.5'	ND	ND	ND	ND	ND	ND	5790
S-2	5/11/2021	1.0'	ND	ND	ND	ND	ND	ND	3300
S-2	10/13/2021	1.0'	ND	ND	ND	ND	ND	ND	143
S-2	10/13/2021	3.0'	ND	ND	ND	ND	ND	ND	4160

Sample ID	Sample Date	Depth (bgs)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Chlorides mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	DRO + GRO combined = 1,000 mg/kg			2,500 mg/kg	10,000 mg/kg
S-2	10/13/2021	5.0'	0.00579	ND	ND	ND	ND	ND	430
S-2	10/13/2021	7.0'	ND	ND	ND	ND	ND	ND	496
S-3	5/11/2021	0.5'	0.516	ND	89.8	1930	257	2276.8	714
S-3	5/11/2021	1.0'	0.393	ND	63.2	1650	218	1931.2	687
S-3	10/13/2021	1.0'	ND	ND	ND	ND	ND	ND	6.93
S-3	10/13/2021	3.0'	ND	ND	ND	ND	ND	ND	26.6
S-3	10/13/2021	5.0'	ND	ND	ND	ND	ND	ND	54.0
S-4	5/11/2021	0.5'	0.0189	ND	ND	366	ND	366	48.3
S-4	5/11/2021	1.0'	0.00488	ND	ND	ND	ND	ND	36.8
S-5	5/11/2021	0.5'	ND	ND	ND	ND	ND	ND	5.14
S-5	5/11/2021	1.0'	ND	ND	ND	ND	ND	ND	ND
S-6	5/11/2021	0.5'	ND	ND	ND	ND	ND	ND	ND
S-6	5/11/2021	1.0'	ND	ND	ND	ND	ND	ND	7.45
S-7	5/11/2021	0.5'	ND	ND	ND	ND	ND	ND	19.0
S-7	5/11/2021	1.0'	ND	ND	ND	ND	ND	ND	9.01
S-8	5/11/2021	0.5'	ND	ND	ND	57.1	ND	57.1	9720
S-8	5/11/2021	1.0'	ND	ND	ND	161	62.5	223.5	5250
S-8	10/13/2021	1.0'	ND	ND	ND	ND	ND	ND	4970
S-8	10/13/2021	3.0'	ND	ND	ND	ND	ND	ND	1510
S-8	10/13/2021	5.0'	ND	ND	ND	ND	ND	ND	880
S-8	10/13/2021	6.0'	ND	ND	ND	ND	ND	ND	818
S-8	12/7/2021	10.0'	NT	NT	NT	NT	NT	NT	688
S-8	12/7/2021	15.0'	NT	NT	NT	NT	NT	NT	105
S-8	12/7/2021	20.0'	NT	NT	NT	NT	NT	NT	61.6
S-9	5/11/2021	0.5'	ND	ND	ND	ND	ND	ND	ND
S-9	5/11/2021	1.0'	ND	ND	ND	ND	ND	ND	ND

ND = Analyte Not Detected NT=Analyte Not Tested

Proposed Remedial Actions

- The depth to groundwater at the site was confirmed to be greater than 55 feet bgs.
- Based on laboratory data results, the area of S-1 on the eastern side of the tank battery exceeded the chloride concentration for the closure criteria from 0 - 0.5 feet bgs, and the area of S-3 on the western side of the berm exceeded for the combined DRO and GRO TPH concentration limit. The area of S-1 will be excavated to a depth of 0.5 feet bgs, and the area in the vicinity of sample location S-3 will be excavated to a depth of 1.0 feet bgs to remove impacted soils.
- Composite soil samples will be collected from the side walls of the excavation at 200 sq. ft. intervals to verify that all horizontal and vertical soil impacts have been removed.
- All excavated areas will be backfilled with clean, like material.
- Photo documentation of all remedial actions and analytical data will be presented in the closure report along with a Final C-141 for the referenced incident.
- Remediation activities will be completed within 60 days of NMOCD approval of this plan.

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575-746-8768.

Respectfully submitted,

Talon/LPE

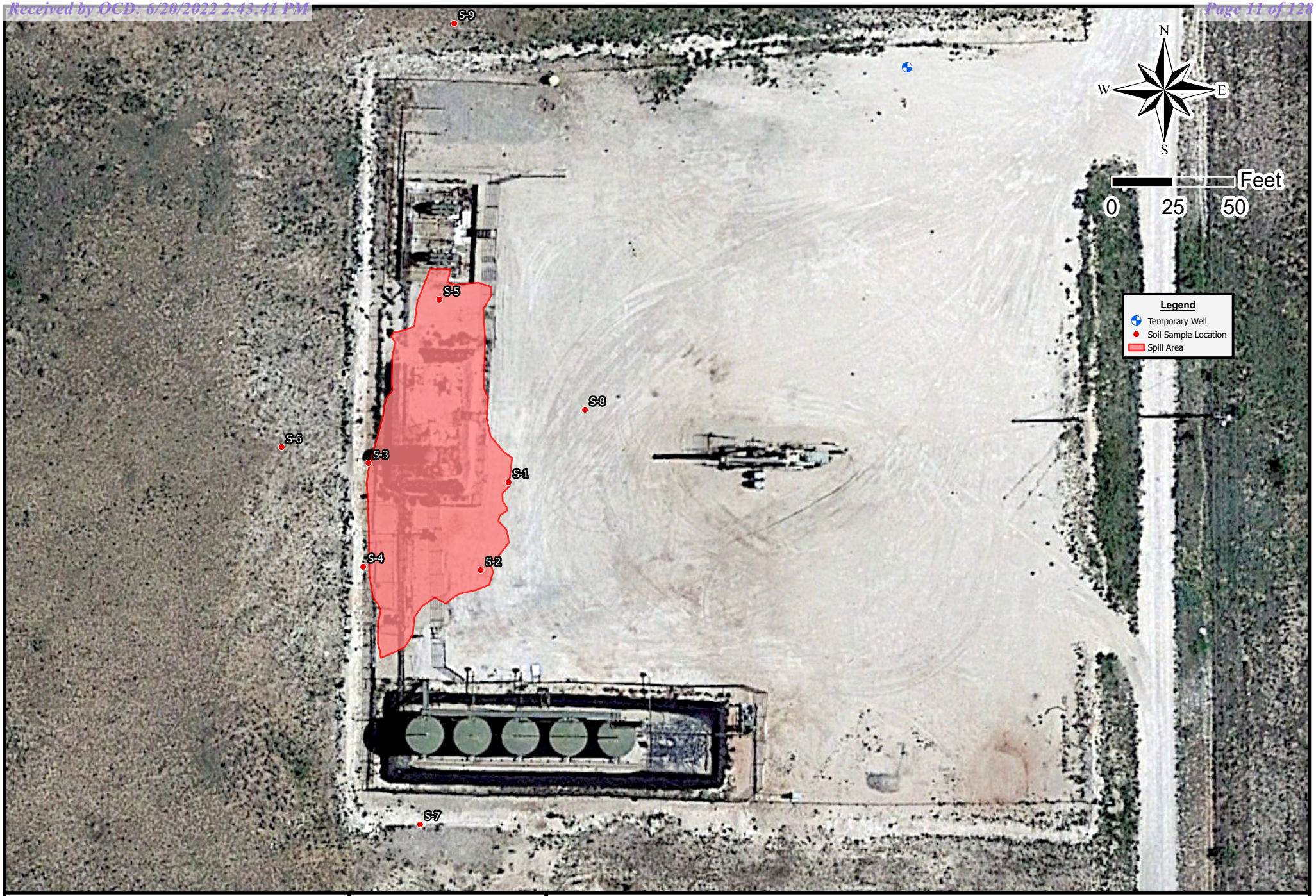
Kayla Taylor
Project Manager

David J. Adkins
Regional Manager

Attachments:
Appendix I Site Plans
Appendix II Boring Log, Groundwater and Soil Data, FEMA Flood Map
Appendix III C-141 Forms, NMOCD Correspodence
Appendix IV Photographic Documentation
Appendix V Site Assessment Data, Larson and Associates, Inc.

APPENDIX I

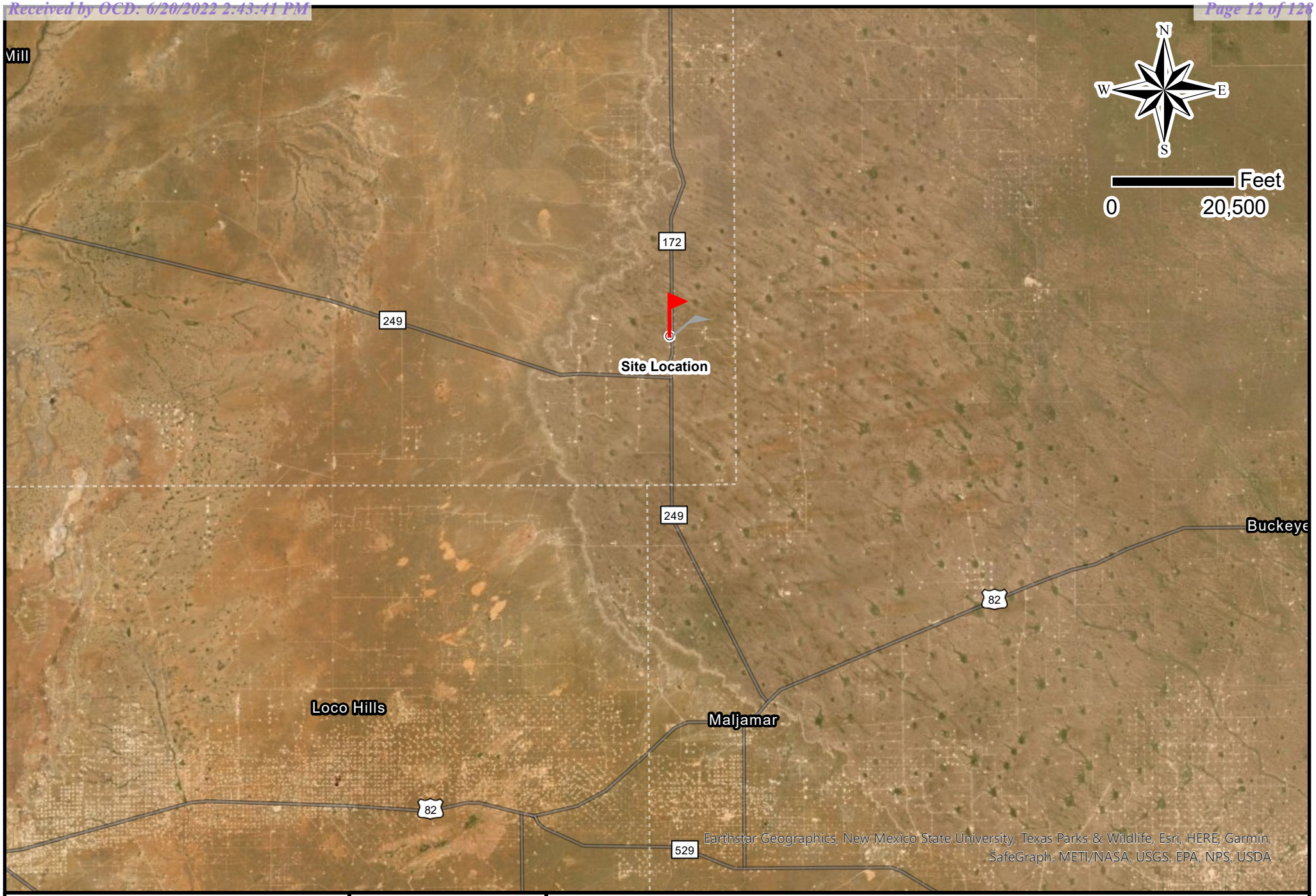
Site Plans



TALON LPE

Drafted: 6/9/2022
1 in = 50 ft
Drafted By: IJR

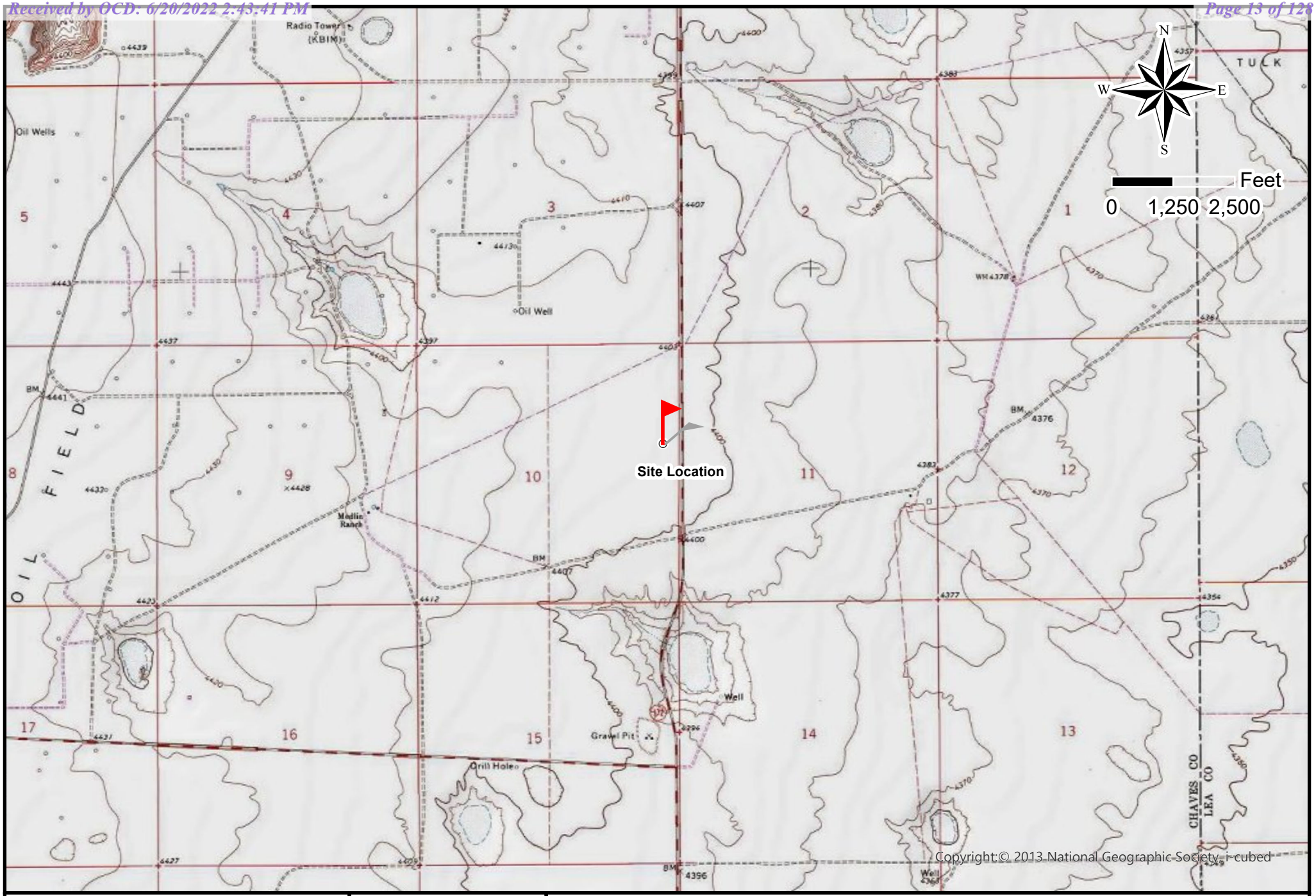
BAM Permian Operating, LLC
Perseus Central Batery
Chaves County, NM
Figure 1 - Site Map



TALON LPE

Drafted: 5/24/2022
1 in = 20,500 ft
Drafted By: IJR

BAM Permian Operating, LLC
Perseus Central Batery
Chaves County, NM
Figure 2 - Site Location Map



TALON LPE

Drafted: 5/24/2022
1 in = 2,500 ft
Drafted By: IJR

BAM Permian Operating, LLC
Perseus Central Battery
Chaves County, NM
Figure 3 - Topographic Map

APPENDIX II

Boring Log

Groundwater and Soil Data

FEMA Flood Map

SOIL BORING / MONITORING WELL LOG

PROJECT: Perseus Central Battery
PROJECT NUMBER: 704001.001.01
CLIENT: BAM Permian Operating, LLC
BORING / WELL NUMBER: B-1
TOTAL DEPTH: 55
SURFACE ELEVATION:
GEOLOGIST: K. Taylor
LATITUDE: 33.032701 N

DRILLING COMPANY: Talon/LPE
DRILLER: D. Lonagin
DRILLING METHOD: Air Rotary
BORE HOLE DIAMETER: 5 7/8"
SCREEN: Diam. ___ Length _____ Slot Size _____
CASING: Diam. ___ Length _____ Type _____
DATE DRILLED: 05/06/2022
LONGITUDE: -103.801365

PAGE 1 of 1

DEPTH (FT.)	Soil Symbol	WELL CONSTRUCTION	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT.)
0								0
						2'	Fine grained sandy silt, large limestone fragments, dark brown, dry, no odor	
							Fine grained sandy silt, large limestone fragments, dark brown, dry, no odor	
							Fine grained silty limestone, pinkish brown, dry, no odor	
10							Fine grained silty limestone, moderately cemented fragments, light brown, dry, no odor	10
							Fine grained sandy limestone, light brown, dry, no odor	
							Fine grained sandy limestone, moderately cemented fragments, light brown, dry, no odor	
20								20
							Fine grained silty limestone, lightly cemented, light brown, dry, no odor	
30								30
40							Fine grained silty sandstone, medium brown, dry, no odor	40
50							Fine grained silty sandstone, light brown, dry	50
						55'		
60							Bottom of hole - Groundwater not encountered	60

REMARKS: The borehole was advanced to 55' below ground surface (bgs). A 2-inch diameter temporary well was constructed of of schedule 40 PVC thread coupled to 10-feet of machine slotted well screen was installed in the open borehole. 72-hours after installation, a Solinest water level meter was utilized to determine the presence or absence of groundwater. The temporary well casing was subsequently removed and the bore hole backfilled with hole plug and hydrated.

KEY TO SYMBOLS

Symbol Description

Strata symbols

Silty sand (SM)

Poorly graded sand

Monitor Well Details

Plugged Soil Boring

New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
2249C	RA 12804 POD1	3	4	4	28	14S	31E	610043	3659452

Driller License: 1737 **Driller Company:** SHADE TREE DRILLING

Driller Name: MULLINS, JUSTINIEL.NER

Drill Start Date:	03/12/2020	**Drill Finish Date:**	03/13/2020	**Plug Date:**	
Log File Date:	04/13/2020	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	250 GPM
Casing Size:	6.00	**Depth Well:**	250 feet	**Depth Water:**	62 feet

Water Bearing Stratifications:	Top	Bottom	Description
	62	187	Sandstone/Gravel/Conglomerate
	206	245	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	130	250

Custom Soil Resource Report
Soil Map

Chaves County, New Mexico, Southern Part

Kt—Kimbrough-Stegall-Slaughter complex

Map Unit Setting

National map unit symbol: 1w7h
Elevation: 3,200 to 4,400 feet
Mean annual precipitation: 10 to 17 inches
Mean annual air temperature: 57 to 66 degrees F
Frost-free period: 180 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Kimbrough and similar soils: 55 percent
Slaughter and similar soils: 20 percent
Stegall and similar soils: 20 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kimbrough

Setting

Landform: Ridges, plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mixed alluvium and/or eolian deposits derived from sedimentary rock

Typical profile

H1 - 0 to 11 inches: gravelly fine sandy loam
H2 - 11 to 19 inches: cemented material
H3 - 19 to 60 inches: very gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 4 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R077DY049TX - Very Shallow 12-17" PZ

Hydric soil rating: No

Description of Stegall

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mixed alluvium and/or eolian deposits derived from sedimentary rock

Typical profile

H1 - 0 to 3 inches: loam
H2 - 3 to 35 inches: clay loam
H3 - 35 to 43 inches: cemented material
H4 - 43 to 60 inches: variable

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 31 to 60 inches to petrocalcic
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 90 percent
Gypsum, maximum content: 6 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R077CY028TX - Limy Upland 16-21" PZ
Hydric soil rating: No

Description of Slaughter

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mixed alluvium and/or eolian deposits derived from sedimentary rock

Typical profile

H1 - 0 to 3 inches: loam
H2 - 3 to 14 inches: clay loam
H3 - 14 to 20 inches: cemented material
H4 - 20 to 60 inches: variable

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 9 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: D
Ecological site: R077CY028TX - Limy Upland 16-21" PZ
Hydric soil rating: No

Minor Components

Sharvana

Percent of map unit: 4 percent
Ecological site: R077CY035TX - Sandy 16-21" PZ
Hydric soil rating: No

Playa

Percent of map unit: 1 percent
Landform: Flood-plain playas
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R042XC017NM - Bottomland
Hydric soil rating: Yes

APPENDIX III

C-141 Forms

NMOCD Correspondence

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	nAPP2109642047
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Chevron USA Inc	OGRID: 4323
Contact Name: Amy Barnhill	Contact Telephone: 432-687-7108
Contact email: ABarnhill@chevron.com	Incident # *nAPP2109642047*
Contact mailing address: 6301 Deauville Blvd Midland, Tx 79706	

Location of Release Source

Latitude 33.0319 Longitude -103.8011
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Perseus Central Battery	Site Type: Oil
Date Release Discovered: 3-27-21	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
H	10	15S	31E	Chaves

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls): 20.64	Volume Recovered (bbls): 20
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Heater firetube gasket failed at the top of firetube flange area. Vac truck picked up ~20bbls oil from inside berm area. FS- shut in well, isolated heater treater, called for vac truck and made notifications.

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

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Amy Barnhill_____ Title: Water Specialist_____

Signature: _____ Date: 4-6-21_____

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

OCD Only

Received by: _____ Date: _____

Spill Calculations

Incident Date			3/27/2021		
Incident Time			Start Time	End Time	
			8:20am	12:36 PM	
Location	Persues CB Heater				
Lat/Long	33.0319,-103.8011				
All volumes in following table in barrels					
Area	Standing Liquid	In Soil	dimensions / shape	Oil Volume	Water Volume
1		x	31'x23'x3/8"	0.57	0
2		x	35'x20'x3/8"	0.39	0
3	x		39'x17'x2"	19.68	0
4					
5					
6					
7					
8					
			Total Fluid	20.64	0

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2109642047
District RP	
Facility ID	30-005-29137
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?	>55 (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	nAPP2109642047
District RP	
Facility ID	30-005-29137
Application ID	

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Printed Name: Blake Morphew

Title: managing member

Signature: _____

Date: 06/16/2022

email: blake@bampermian.com

Telephone: 432-242-8851

OCD Only

Received by: _____

Date: _____

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2109642047
District RP	
Facility ID	30-005-29137
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 site map 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.

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Printed Name: Blake Morphew
Title: managing member

Signature: _____
Date: 06/16/2022

email: blake@bampermian.com
Telephone: 432-242-8851

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

APPENDIX IV

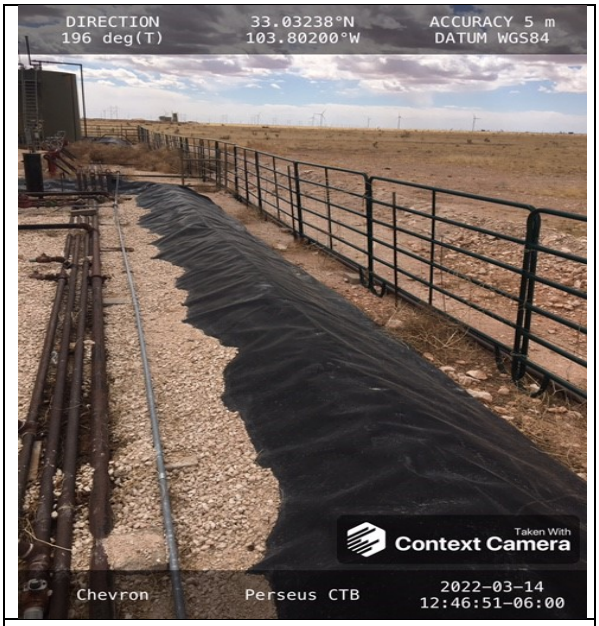
Photographic Documentation

Photograph No.1 Description:

View of well sign.

Photograph No.2 Description:

View of release area in containment on western portion of the well pad.



Photograph No.3 Description:

View of release area and adjacent pasture on western portion of well pad.

Photograph No.4 Description:

View of completed temporary well on northern portion of well pad.

APPENDIX V

Site Assessment Data

Larson and Associates, Inc.

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

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
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(NAD 83 in decimal degrees to 5 decimal places)

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

Nature and Volume of Release

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

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	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
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☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

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Printed Name: Amy Barnhill_____ Title: Water Specialist_____

Signature: _____ Date: 4-6-21_____

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

OCD Only

Received by: _____ Date: _____

Spill Calculations

Incident Date			3/27/2021		
Incident Time			Start Time	End Time	
			8:20am	12:36 PM	
Location	Persues CB Heater				
Lat/Long	33.0319,-103.8011				
All volumes in following table in barrels					
Area	Standing Liquid	In Soil	dimensions / shape	Oil Volume	Water Volume
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2		x	35'x20'x3/8"	0.39	0
3	x		39'x17'x2"	19.68	0
4					
5					
6					
7					
8					
			Total Fluid	20.64	0

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-2126-1
Laboratory Sample Delivery Group: 21-0100-21
Client Project/Site: PERSEUS CTB

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

Attn: Mr. Mark J Larson

Authorized for release by:
5/17/2021 11:52:45 AM
Jamie Herman, Client Program Manager
(303)941-7857
jamie.herman@eurofinset.com

Designee for

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: PERSEUS CTB

Laboratory Job ID: 880-2126-1
SDG: 21-0100-21

Table of Contents

Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-2126-1
Project/Site: PERSEUS CTB SDG: 21-0100-21

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Job ID: 880-2126-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-2126-1

Receipt
The samples were received on 5/12/2021 3:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.5°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-3024 and analytical batch 880-3036 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-3037 and analytical batch 880-3006 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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

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: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-1 0.5'

Lab Sample ID: 880-2126-1
Matrix: Solid
Date Collected: 05/11/21 12:00
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F1	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:36	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/12/21 15:57	05/12/21 19:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:36	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/12/21 15:57	05/12/21 19:36	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		05/12/21 15:57	05/12/21 19:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/12/21 15:57*	*05/12/21 19:36*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/12/21 15:57*	*05/12/21 19:36*	*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	<49.7	U *1	49.7		mg/Kg		05/12/21 16:07	05/12/21 20:47	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		05/12/21 16:07	05/12/21 20:47	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		05/12/21 16:07	05/12/21 20:47	1
Total TPH	<49.7	U	49.7		mg/Kg		05/12/21 16:07	05/12/21 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*05/12/21 16:07*	*05/12/21 20:47*	*1*
o-Terphenyl	*100*		*70 - 130*	*05/12/21 16:07*	*05/12/21 20:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11600**		99.2		mg/Kg			05/14/21 10:55	20

Client Sample ID: S-1 1'

Lab Sample ID: 880-2126-2
Matrix: Solid
Date Collected: 05/11/21 12:05
Date Received: 05/12/21 15:30
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:57	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/12/21 15:57	05/12/21 19:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:57	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/12/21 15:57	05/12/21 19:57	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		05/12/21 15:57	05/12/21 19:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*05/12/21 15:57*	*05/12/21 19:57*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*05/12/21 15:57*	*05/12/21 19:57*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-1 1'

Lab Sample ID: 880-2126-2
Matrix: Solid
Date Collected: 05/11/21 12:05
Date Received: 05/12/21 15:30
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		05/12/21 16:07	05/12/21 21:49	1
Diesel Range Organics (Over C10-C28)	**116**		50.0		mg/Kg		05/12/21 16:07	05/12/21 21:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/12/21 21:49	1
Total TPH	**116**		50.0		mg/Kg		05/12/21 16:07	05/12/21 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*05/12/21 16:07*	*05/12/21 21:49*	*1*
o-Terphenyl	*89*		*70 - 130*	*05/12/21 16:07*	*05/12/21 21:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4150**		25.0		mg/Kg			05/13/21 19:22	5

Client Sample ID: S-2 0.5'

Lab Sample ID: 880-2126-3
Matrix: Solid
Date Collected: 05/11/21 12:10
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/12/21 20:17	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/12/21 20:17	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/12/21 20:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/12/21 20:17	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/12/21 20:17	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/12/21 20:17	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/12/21 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*05/12/21 15:57*	*05/12/21 20:17*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*05/12/21 15:57*	*05/12/21 20:17*	*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	<49.8	U *1	49.8		mg/Kg		05/12/21 16:07	05/12/21 22:10	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/12/21 16:07	05/12/21 22:10	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/12/21 16:07	05/12/21 22:10	1
Total TPH	<49.8	U	49.8		mg/Kg		05/12/21 16:07	05/12/21 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*05/12/21 16:07*	*05/12/21 22:10*	*1*
o-Terphenyl	*85*		*70 - 130*	*05/12/21 16:07*	*05/12/21 22:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5790**		50.0		mg/Kg			05/13/21 19:28	10

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-2 1'

Lab Sample ID: 880-2126-4
Matrix: Solid
Date Collected: 05/11/21 12:15
Date Received: 05/12/21 15:30
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/12/21 20:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/12/21 20:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/12/21 20:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/12/21 20:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/12/21 20:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/12/21 20:38	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/12/21 20:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*05/12/21 15:57*	*05/12/21 20:38*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/12/21 15:57*	*05/12/21 20:38*	*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 *1	50.0		mg/Kg		05/12/21 16:07	05/12/21 22:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/12/21 22:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/12/21 22:31	1
Total TPH	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/12/21 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*05/12/21 16:07*	*05/12/21 22:31*	*1*
o-Terphenyl	*86*		*70 - 130*	*05/12/21 16:07*	*05/12/21 22:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3300**		25.0		mg/Kg			05/13/21 19:33	5

Client Sample ID: S-3 0.5'

Lab Sample ID: 880-2126-5
Matrix: Solid
Date Collected: 05/11/21 12:20
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 20:58	1
Toluene	**0.0161**		0.00200		mg/Kg		05/12/21 15:57	05/12/21 20:58	1
Ethylbenzene	**0.181**		0.00200		mg/Kg		05/12/21 15:57	05/12/21 20:58	1
m-Xylene & p-Xylene	**0.183**		0.00399		mg/Kg		05/12/21 15:57	05/12/21 20:58	1
o-Xylene	**0.136**		0.00200		mg/Kg		05/12/21 15:57	05/12/21 20:58	1
Xylenes, Total	**0.319**		0.00399		mg/Kg		05/12/21 15:57	05/12/21 20:58	1
Total BTEX	**0.516**		0.00399		mg/Kg		05/12/21 15:57	05/12/21 20:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*05/12/21 15:57*	*05/12/21 20:58*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/12/21 15:57*	*05/12/21 20:58*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-3 0.5'

Lab Sample ID: 880-2126-5
Matrix: Solid
Date Collected: 05/11/21 12:20
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	89.8	*1	49.9		mg/Kg		05/12/21 16:07	05/12/21 22:59	1
Diesel Range Organics (Over C10-C28)	1930		49.9		mg/Kg		05/12/21 16:07	05/12/21 22:59	1
Oil Range Organics (Over C28-C36)	257		49.9		mg/Kg		05/12/21 16:07	05/12/21 22:59	1
Total TPH	2280		49.9		mg/Kg		05/12/21 16:07	05/12/21 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*05/12/21 16:07*	*05/12/21 22:59*	*1*
o-Terphenyl	*88*		*70 - 130*	*05/12/21 16:07*	*05/12/21 22:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	714		5.04		mg/Kg			05/13/21 19:48	1

Client Sample ID: S-3 1'

Lab Sample ID: 880-2126-6
Matrix: Solid
Date Collected: 05/11/21 12:22
Date Received: 05/12/21 15:30
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 21:19	1
Toluene	0.0112		0.00200		mg/Kg		05/12/21 15:57	05/12/21 21:19	1
Ethylbenzene	0.140		0.00200		mg/Kg		05/12/21 15:57	05/12/21 21:19	1
m-Xylene & p-Xylene	0.134		0.00401		mg/Kg		05/12/21 15:57	05/12/21 21:19	1
o-Xylene	0.108		0.00200		mg/Kg		05/12/21 15:57	05/12/21 21:19	1
Xylenes, Total	0.242		0.00401		mg/Kg		05/12/21 15:57	05/12/21 21:19	1
Total BTEX	0.393		0.00401		mg/Kg		05/12/21 15:57	05/12/21 21:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*181*	*S1+*	*70 - 130*	*05/12/21 15:57*	*05/12/21 21:19*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*05/12/21 15:57*	*05/12/21 21:19*	*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	63.2	*1	49.8		mg/Kg		05/12/21 16:07	05/12/21 23:30	1
Diesel Range Organics (Over C10-C28)	1650		49.8		mg/Kg		05/12/21 16:07	05/12/21 23:30	1
Oil Range Organics (Over C28-C36)	218		49.8		mg/Kg		05/12/21 16:07	05/12/21 23:30	1
Total TPH	1930		49.8		mg/Kg		05/12/21 16:07	05/12/21 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*05/12/21 16:07*	*05/12/21 23:30*	*1*
o-Terphenyl	*91*		*70 - 130*	*05/12/21 16:07*	*05/12/21 23:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	687		5.05		mg/Kg			05/13/21 19:53	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-4 0.5'

Lab Sample ID: 880-2126-7
Matrix: Solid
Date Collected: 05/11/21 12:25
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/12/21 15:57	05/12/21 21:39	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/12/21 15:57	05/12/21 21:39	1
Ethylbenzene	**0.00415**		0.00201		mg/Kg		05/12/21 15:57	05/12/21 21:39	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/12/21 15:57	05/12/21 21:39	1
o-Xylene	**0.0147**		0.00201		mg/Kg		05/12/21 15:57	05/12/21 21:39	1
Xylenes, Total	**0.0147**		0.00402		mg/Kg		05/12/21 15:57	05/12/21 21:39	1
Total BTEX	**0.0189**		0.00402		mg/Kg		05/12/21 15:57	05/12/21 21:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*05/12/21 15:57*	*05/12/21 21:39*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*05/12/21 15:57*	*05/12/21 21:39*	*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	<49.7	U *1	49.7		mg/Kg		05/12/21 16:07	05/13/21 00:02	1
Diesel Range Organics (Over C10-C28)	**366**		49.7		mg/Kg		05/12/21 16:07	05/13/21 00:02	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		05/12/21 16:07	05/13/21 00:02	1
Total TPH	**366**		49.7		mg/Kg		05/12/21 16:07	05/13/21 00:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*05/12/21 16:07*	*05/13/21 00:02*	*1*
o-Terphenyl	*97*		*70 - 130*	*05/12/21 16:07*	*05/13/21 00:02*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**48.3**		4.98		mg/Kg			05/13/21 19:59	1

Client Sample ID: S-4 1'

Lab Sample ID: 880-2126-8
Matrix: Solid
Date Collected: 05/11/21 12:27
Date Received: 05/12/21 15:30
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/12/21 15:57	05/12/21 21:59	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/12/21 15:57	05/12/21 21:59	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/12/21 15:57	05/12/21 21:59	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/12/21 15:57	05/12/21 21:59	1
o-Xylene	**0.00488**		0.00201		mg/Kg		05/12/21 15:57	05/12/21 21:59	1
Xylenes, Total	**0.00488**		0.00402		mg/Kg		05/12/21 15:57	05/12/21 21:59	1
Total BTEX	**0.00488**		0.00402		mg/Kg		05/12/21 15:57	05/12/21 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*152*	*S1+*	*70 - 130*	*05/12/21 15:57*	*05/12/21 21:59*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/12/21 15:57*	*05/12/21 21:59*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-4 1'

Lab Sample ID: 880-2126-8
Matrix: Solid
Date Collected: 05/11/21 12:27
Date Received: 05/12/21 15:30
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		05/12/21 16:07	05/13/21 00:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 00:23	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 00:23	1
Total TPH	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 00:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*05/12/21 16:07*	*05/13/21 00:23*	*1*
o-Terphenyl	*96*		*70 - 130*	*05/12/21 16:07*	*05/13/21 00:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36.8**		4.97		mg/Kg			05/13/21 20:04	1

Client Sample ID: S-5 0.5'

Lab Sample ID: 880-2126-9
Matrix: Solid
Date Collected: 05/11/21 12:30
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/12/21 22:20	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/12/21 22:20	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/12/21 22:20	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		05/12/21 15:57	05/12/21 22:20	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/12/21 22:20	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		05/12/21 15:57	05/12/21 22:20	1
Total BTEX	<0.00403	U	0.00403		mg/Kg		05/12/21 15:57	05/12/21 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*05/12/21 15:57*	*05/12/21 22:20*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/12/21 15:57*	*05/12/21 22:20*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		05/12/21 16:07	05/13/21 00:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/13/21 00:44	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/13/21 00:44	1
Total TPH	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/13/21 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*05/12/21 16:07*	*05/13/21 00:44*	*1*
o-Terphenyl	*88*		*70 - 130*	*05/12/21 16:07*	*05/13/21 00:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.14**		4.99		mg/Kg			05/13/21 20:09	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-5 1'

Lab Sample ID: 880-2126-10
Matrix: Solid
Date Collected: 05/11/21 12:32
Date Received: 05/12/21 15:30
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/12/21 22:40	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/12/21 22:40	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/12/21 22:40	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/12/21 15:57	05/12/21 22:40	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/12/21 22:40	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/12/21 15:57	05/12/21 22:40	1
Total BTEX	<0.00404	U	0.00404		mg/Kg		05/12/21 15:57	05/12/21 22:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/12/21 15:57*	*05/12/21 22:40*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/12/21 15:57*	*05/12/21 22:40*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	49.8		mg/Kg		05/12/21 16:07	05/13/21 01:04	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/12/21 16:07	05/13/21 01:04	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/12/21 16:07	05/13/21 01:04	1
Total TPH	<49.8	U	49.8		mg/Kg		05/12/21 16:07	05/13/21 01:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*05/12/21 16:07*	*05/13/21 01:04*	*1*
o-Terphenyl	*88*		*70 - 130*	*05/12/21 16:07*	*05/13/21 01:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.02	U	5.02		mg/Kg			05/13/21 20:14	1

Client Sample ID: S-6 0.5'

Lab Sample ID: 880-2126-11
Matrix: Solid
Date Collected: 05/11/21 12:35
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/13/21 00:30	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/13/21 00:30	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/13/21 00:30	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/12/21 15:57	05/13/21 00:30	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/13/21 00:30	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/12/21 15:57	05/13/21 00:30	1
Total BTEX	<0.00404	U	0.00404		mg/Kg		05/12/21 15:57	05/13/21 00:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/12/21 15:57*	*05/13/21 00:30*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/12/21 15:57*	*05/13/21 00:30*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-6 0.5'

Lab Sample ID: 880-2126-11
Matrix: Solid
Date Collected: 05/11/21 12:35
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		05/12/21 16:07	05/13/21 01:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 01:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 01:46	1
Total TPH	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 01:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*05/12/21 16:07*	*05/13/21 01:46*	*1*
o-Terphenyl	*89*		*70 - 130*	*05/12/21 16:07*	*05/13/21 01:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/14/21 11:10	1

Client Sample ID: S-6 1'

Lab Sample ID: 880-2126-12
Matrix: Solid
Date Collected: 05/11/21 12:37
Date Received: 05/12/21 15:30
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/13/21 00:50	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/13/21 00:50	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/13/21 00:50	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		05/12/21 15:57	05/13/21 00:50	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/12/21 15:57	05/13/21 00:50	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		05/12/21 15:57	05/13/21 00:50	1
Total BTEX	<0.00403	U	0.00403		mg/Kg		05/12/21 15:57	05/13/21 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*	*05/12/21 15:57*	*05/13/21 00:50*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*05/12/21 15:57*	*05/13/21 00:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		05/12/21 16:07	05/13/21 02:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/13/21 02:07	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/13/21 02:07	1
Total TPH	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/13/21 02:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*05/12/21 16:07*	*05/13/21 02:07*	*1*
o-Terphenyl	*87*		*70 - 130*	*05/12/21 16:07*	*05/13/21 02:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.45**		5.04		mg/Kg			05/13/21 20:53	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-7 0.5'

Lab Sample ID: 880-2126-13
Matrix: Solid

Date Collected: 05/11/21 12:40
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/13/21 01:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/13/21 01:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/13/21 01:10	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/12/21 15:57	05/13/21 01:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/13/21 01:10	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/12/21 15:57	05/13/21 01:10	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		05/12/21 15:57	05/13/21 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*	*05/12/21 15:57*	*05/13/21 01:10*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*05/12/21 15:57*	*05/13/21 01:10*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		05/12/21 16:07	05/13/21 02:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 02:27	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 02:27	1
Total TPH	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 02:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*05/12/21 16:07*	*05/13/21 02:27*	*1*
o-Terphenyl	*89*		*70 - 130*	*05/12/21 16:07*	*05/13/21 02:27*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19.0**		5.02		mg/Kg			05/13/21 20:59	1

Client Sample ID: S-7 1'

Lab Sample ID: 880-2126-14
Matrix: Solid

Date Collected: 05/11/21 12:42
Date Received: 05/12/21 15:30
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/13/21 01:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/13/21 01:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/13/21 01:31	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/12/21 15:57	05/13/21 01:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/13/21 01:31	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/12/21 15:57	05/13/21 01:31	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		05/12/21 15:57	05/13/21 01:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*05/12/21 15:57*	*05/13/21 01:31*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/12/21 15:57*	*05/13/21 01:31*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-7 1'

Lab Sample ID: 880-2126-14
Matrix: Solid
Date Collected: 05/11/21 12:42
Date Received: 05/12/21 15:30
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		05/12/21 16:07	05/13/21 02:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 02:48	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 02:48	1
Total TPH	<49.9	U	49.9		mg/Kg		05/12/21 16:07	05/13/21 02:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*05/12/21 16:07*	*05/13/21 02:48*	*1*
o-Terphenyl	*91*		*70 - 130*	*05/12/21 16:07*	*05/13/21 02:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.01**		4.96		mg/Kg			05/13/21 21:14	1

Client Sample ID: S-8 0.5'

Lab Sample ID: 880-2126-15
Matrix: Solid
Date Collected: 05/11/21 12:48
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/13/21 01:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/13/21 01:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/13/21 01:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/13/21 01:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/13/21 01:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/13/21 01:51	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/13/21 01:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*05/12/21 15:57*	*05/13/21 01:51*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/12/21 15:57*	*05/13/21 01:51*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		05/12/21 16:07	05/13/21 03:09	1
Diesel Range Organics (Over C10-C28)	**57.1**		50.0		mg/Kg		05/12/21 16:07	05/13/21 03:09	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/13/21 03:09	1
Total TPH	**57.1**		50.0		mg/Kg		05/12/21 16:07	05/13/21 03:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*05/12/21 16:07*	*05/13/21 03:09*	*1*
o-Terphenyl	*93*		*70 - 130*	*05/12/21 16:07*	*05/13/21 03:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9720**		49.5		mg/Kg			05/13/21 21:19	10

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-8 1'

Lab Sample ID: 880-2126-16
Matrix: Solid
Date Collected: 05/11/21 12:50
Date Received: 05/12/21 15:30
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/13/21 02:12	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/13/21 02:12	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/13/21 02:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/13/21 02:12	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/12/21 15:57	05/13/21 02:12	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/13/21 02:12	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/12/21 15:57	05/13/21 02:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*05/12/21 15:57*	*05/13/21 02:12*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/12/21 15:57*	*05/13/21 02:12*	*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	<50.0	U *1	50.0		mg/Kg		05/12/21 16:07	05/13/21 03:30	1
Diesel Range Organics (Over C10-C28)	**161**		50.0		mg/Kg		05/12/21 16:07	05/13/21 03:30	1
Oil Range Organics (Over C28-C36)	**62.5**		50.0		mg/Kg		05/12/21 16:07	05/13/21 03:30	1
Total TPH	**224**		50.0		mg/Kg		05/12/21 16:07	05/13/21 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*05/12/21 16:07*	*05/13/21 03:30*	*1*
o-Terphenyl	*89*		*70 - 130*	*05/12/21 16:07*	*05/13/21 03:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5250**		50.4		mg/Kg			05/13/21 21:24	10

Client Sample ID: S-9 0.5'

Lab Sample ID: 880-2126-17
Matrix: Solid
Date Collected: 05/11/21 13:00
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/12/21 15:57	05/13/21 02:32	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/12/21 15:57	05/13/21 02:32	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/12/21 15:57	05/13/21 02:32	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		05/12/21 15:57	05/13/21 02:32	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/12/21 15:57	05/13/21 02:32	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		05/12/21 15:57	05/13/21 02:32	1
Total BTEX	<0.00397	U	0.00397		mg/Kg		05/12/21 15:57	05/13/21 02:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/12/21 15:57*	*05/13/21 02:32*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*05/12/21 15:57*	*05/13/21 02:32*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-9 0.5'

Lab Sample ID: 880-2126-17
Matrix: Solid
Date Collected: 05/11/21 13:00
Date Received: 05/12/21 15:30
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	49.8		mg/Kg		05/12/21 16:07	05/13/21 03:51	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/12/21 16:07	05/13/21 03:51	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/12/21 16:07	05/13/21 03:51	1
Total TPH	<49.8	U	49.8		mg/Kg		05/12/21 16:07	05/13/21 03:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*05/12/21 16:07*	*05/13/21 03:51*	*1*
o-Terphenyl	*86*		*70 - 130*	*05/12/21 16:07*	*05/13/21 03:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.99	U	4.99		mg/Kg			05/13/21 21:30	1

Client Sample ID: S-9 1'

Lab Sample ID: 880-2126-18
Matrix: Solid
Date Collected: 05/11/21 13:02
Date Received: 05/12/21 15:30
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/12/21 15:57	05/13/21 02:53	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/12/21 15:57	05/13/21 02:53	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/12/21 15:57	05/13/21 02:53	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/12/21 15:57	05/13/21 02:53	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/12/21 15:57	05/13/21 02:53	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/12/21 15:57	05/13/21 02:53	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		05/12/21 15:57	05/13/21 02:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/12/21 15:57*	*05/13/21 02:53*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*05/12/21 15:57*	*05/13/21 02:53*	*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	<50.0	U *1	50.0		mg/Kg		05/12/21 16:07	05/13/21 04:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/13/21 04:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/13/21 04:12	1
Total TPH	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/13/21 04:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*05/12/21 16:07*	*05/13/21 04:12*	*1*
o-Terphenyl	*87*		*70 - 130*	*05/12/21 16:07*	*05/13/21 04:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/13/21 21:35	1

Eurofins Xenco, Midland

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-2126-1	S-1 0.5'	108	99										
880-2126-1 MS	S-1 0.5'	110	99										
880-2126-1 MSD	S-1 0.5'	112	97										
880-2126-2	S-1 1'	113	102										
880-2126-3	S-2 0.5'	116	103										
880-2126-4	S-2 1'	113	100										
880-2126-5	S-3 0.5'	107	91										
880-2126-6	S-3 1'	181 S1+	79										
880-2126-7	S-4 0.5'	101	89										
880-2126-8	S-4 1'	152 S1+	100										
880-2126-9	S-5 0.5'	116	99										
880-2126-10	S-5 1'	110	100										
880-2126-11	S-6 0.5'	108	97										
880-2126-12	S-6 1'	134 S1+	84										
880-2126-13	S-7 0.5'	134 S1+	86										
880-2126-14	S-7 1'	114	99										
880-2126-15	S-8 0.5'	116	96										
880-2126-16	S-8 1'	113	100										
880-2126-17	S-9 0.5'	110	101										
880-2126-18	S-9 1'	109	101										
LCS 880-3024/1-A	Lab Control Sample	101	97										
LCSD 880-3024/2-A	Lab Control Sample Dup	102	99										
MB 880-3024/5-A	Method Blank	106	94										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-2126-1	S-1 0.5'	89	100										
880-2126-1 MS	S-1 0.5'	81	83										
880-2126-1 MSD	S-1 0.5'	90	92										
880-2126-2	S-1 1'	80	89										
880-2126-3	S-2 0.5'	76	85										
880-2126-4	S-2 1'	77	86										
880-2126-5	S-3 0.5'	81	88										
880-2126-6	S-3 1'	84	91										
880-2126-7	S-4 0.5'	86	97										
880-2126-8	S-4 1'	85	96										
880-2126-9	S-5 0.5'	78	88										
880-2126-10	S-5 1'	77	88										
880-2126-11	S-6 0.5'	79	89										
880-2126-12	S-6 1'	77	87										
880-2126-13	S-7 0.5'	80	89										
880-2126-14	S-7 1'	79	91										

Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-2126-1
Project/Site: PERSEUS CTB SDG: 21-0100-21

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)								
880-2126-15	S-8 0.5'	82	93								
880-2126-16	S-8 1'	79	89								
880-2126-17	S-9 0.5'	76	86								
880-2126-18	S-9 1'	77	87								
LCS 880-3037/2-A	Lab Control Sample	101	109								
LCSD 880-3037/3-A	Lab Control Sample Dup	136 S1+	149 S1+								
MB 880-3037/1-A	Method Blank	92	107								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3024/5-A
Matrix: Solid
Analysis Batch: 3036

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3024

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/12/21 15:57	05/12/21 19:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 15:57	05/12/21 19:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/12/21 15:57	05/12/21 19:08	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/12/21 15:57	05/12/21 19:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/12/21 15:57*	*05/12/21 19:08*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/12/21 15:57*	*05/12/21 19:08*	*1*

Lab Sample ID: LCS 880-3024/1-A
Matrix: Solid
Analysis Batch: 3036

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3024

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08391		mg/Kg		84	70 - 130		
Toluene			0.100	0.09578		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.1016		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.2071		mg/Kg		104	70 - 130		
o-Xylene			0.100	0.1031		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-3024/2-A
Matrix: Solid
Analysis Batch: 3036

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3024

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08288		mg/Kg		83	70 - 130	1	35
Toluene			0.100	0.09568		mg/Kg		96	70 - 130	0	35
Ethylbenzene			0.100	0.1011		mg/Kg		101	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2072		mg/Kg		104	70 - 130	0	35
o-Xylene			0.100	0.1047		mg/Kg		105	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-2126-1 MS
Matrix: Solid
Analysis Batch: 3036

Client Sample ID: S-1 0.5'
Prep Type: Total/NA
Prep Batch: 3024

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U F1	0.101	0.07814		mg/Kg		78	70 - 130		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

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

Lab Sample ID: 880-2126-1 MS
Matrix: Solid
Analysis Batch: 3036

Client Sample ID: S-1 0.5'
Prep Type: Total/NA
Prep Batch: 3024

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00200	U	0.101	0.09201		mg/Kg		91	70 - 130
Ethylbenzene	<0.00200	U	0.101	0.09487		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.202	0.1948		mg/Kg		97	70 - 130
o-Xylene	<0.00200	U	0.101	0.09805		mg/Kg		97	70 - 130

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

Lab Sample ID: 880-2126-1 MSD
Matrix: Solid
Analysis Batch: 3036

Client Sample ID: S-1 0.5'
Prep Type: Total/NA
Prep Batch: 3024

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0998	0.06588	F1	mg/Kg		66	70 - 130	17	35
Toluene	<0.00200	U	0.0998	0.07810		mg/Kg		78	70 - 130	16	35
Ethylbenzene	<0.00200	U	0.0998	0.08049		mg/Kg		81	70 - 130	16	35
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1664		mg/Kg		83	70 - 130	16	35
o-Xylene	<0.00200	U	0.0998	0.08414		mg/Kg		84	70 - 130	15	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 880-3037/1-A
Matrix: Solid
Analysis Batch: 3006

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3037

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/12/21 19:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/12/21 19:45	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/12/21 19:45	1
Total TPH	<50.0	U	50.0		mg/Kg		05/12/21 16:07	05/12/21 19:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*05/12/21 16:07*	*05/12/21 19:45*	*1*
o-Terphenyl	*107*		*70 - 130*	*05/12/21 16:07*	*05/12/21 19:45*	*1*

Lab Sample ID: LCS 880-3037/2-A
Matrix: Solid
Analysis Batch: 3006

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3037

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	888.3		mg/Kg		89	70 - 130

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

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

Lab Sample ID: LCS 880-3037/2-A
Matrix: Solid
Analysis Batch: 3006

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3037

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: LCSD 880-3037/3-A
Matrix: Solid
Analysis Batch: 3006

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3037

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1098	*1	mg/Kg		110	70 - 130	21	20
Diesel Range Organics (Over C10-C28)			1000	1285		mg/Kg		129	70 - 130	18	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*136*	*S1+*	*70 - 130*
o-Terphenyl	*149*	*S1+*	*70 - 130*

Lab Sample ID: 880-2126-1 MS
Matrix: Solid
Analysis Batch: 3006

Client Sample ID: S-1 0.5'
Prep Type: Total/NA
Prep Batch: 3037

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.7	U *1	996	816.6		mg/Kg		77	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.7	U	996	923.2		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*81*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

Lab Sample ID: 880-2126-1 MSD
Matrix: Solid
Analysis Batch: 3006

Client Sample ID: S-1 0.5'
Prep Type: Total/NA
Prep Batch: 3037

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	<49.7	U *1	998	851.4		mg/Kg		81	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<49.7	U	998	1036		mg/Kg		101	70 - 130	12	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3054/1-A
Matrix: Solid
Analysis Batch: 3081

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			05/13/21 18:25	1

Lab Sample ID: LCS 880-3054/2-A
Matrix: Solid
Analysis Batch: 3081

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	247.0		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-3054/3-A
Matrix: Solid
Analysis Batch: 3081

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	244.2		mg/Kg		98	90 - 110	1	20

Lab Sample ID: 880-2126-1 MS
Matrix: Solid
Analysis Batch: 3081

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	11600		4960	16360		mg/Kg		95	90 - 110		

Lab Sample ID: 880-2126-1 MSD
Matrix: Solid
Analysis Batch: 3081

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	11600		4960	16330		mg/Kg		95	90 - 110	0	20

Lab Sample ID: 880-2126-11 MS
Matrix: Solid
Analysis Batch: 3081

Client Sample ID: S-6 0.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	<5.00	U	250	248.4		mg/Kg		98	90 - 110		

Lab Sample ID: 880-2126-11 MSD
Matrix: Solid
Analysis Batch: 3081

Client Sample ID: S-6 0.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<5.00	U	250	246.7		mg/Kg		97	90 - 110	1	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

GC VOA

Prep Batch: 3024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2126-1	S-1 0.5'	Total/NA	Solid	5035	
880-2126-2	S-1 1'	Total/NA	Solid	5035	
880-2126-3	S-2 0.5'	Total/NA	Solid	5035	
880-2126-4	S-2 1'	Total/NA	Solid	5035	
880-2126-5	S-3 0.5'	Total/NA	Solid	5035	
880-2126-6	S-3 1'	Total/NA	Solid	5035	
880-2126-7	S-4 0.5'	Total/NA	Solid	5035	
880-2126-8	S-4 1'	Total/NA	Solid	5035	
880-2126-9	S-5 0.5'	Total/NA	Solid	5035	
880-2126-10	S-5 1'	Total/NA	Solid	5035	
880-2126-11	S-6 0.5'	Total/NA	Solid	5035	
880-2126-12	S-6 1'	Total/NA	Solid	5035	
880-2126-13	S-7 0.5'	Total/NA	Solid	5035	
880-2126-14	S-7 1'	Total/NA	Solid	5035	
880-2126-15	S-8 0.5'	Total/NA	Solid	5035	
880-2126-16	S-8 1'	Total/NA	Solid	5035	
880-2126-17	S-9 0.5'	Total/NA	Solid	5035	
880-2126-18	S-9 1'	Total/NA	Solid	5035	
MB 880-3024/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3024/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3024/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-2126-1 MS	S-1 0.5'	Total/NA	Solid	5035	
880-2126-1 MSD	S-1 0.5'	Total/NA	Solid	5035	

Analysis Batch: 3036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2126-1	S-1 0.5'	Total/NA	Solid	8021B	3024
880-2126-2	S-1 1'	Total/NA	Solid	8021B	3024
880-2126-3	S-2 0.5'	Total/NA	Solid	8021B	3024
880-2126-4	S-2 1'	Total/NA	Solid	8021B	3024
880-2126-5	S-3 0.5'	Total/NA	Solid	8021B	3024
880-2126-6	S-3 1'	Total/NA	Solid	8021B	3024
880-2126-7	S-4 0.5'	Total/NA	Solid	8021B	3024
880-2126-8	S-4 1'	Total/NA	Solid	8021B	3024
880-2126-9	S-5 0.5'	Total/NA	Solid	8021B	3024
880-2126-10	S-5 1'	Total/NA	Solid	8021B	3024
880-2126-11	S-6 0.5'	Total/NA	Solid	8021B	3024
880-2126-12	S-6 1'	Total/NA	Solid	8021B	3024
880-2126-13	S-7 0.5'	Total/NA	Solid	8021B	3024
880-2126-14	S-7 1'	Total/NA	Solid	8021B	3024
880-2126-15	S-8 0.5'	Total/NA	Solid	8021B	3024
880-2126-16	S-8 1'	Total/NA	Solid	8021B	3024
880-2126-17	S-9 0.5'	Total/NA	Solid	8021B	3024
880-2126-18	S-9 1'	Total/NA	Solid	8021B	3024
MB 880-3024/5-A	Method Blank	Total/NA	Solid	8021B	3024
LCS 880-3024/1-A	Lab Control Sample	Total/NA	Solid	8021B	3024
LCSD 880-3024/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3024
880-2126-1 MS	S-1 0.5'	Total/NA	Solid	8021B	3024
880-2126-1 MSD	S-1 0.5'	Total/NA	Solid	8021B	3024

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

GC Semi VOA

Analysis Batch: 3006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2126-1	S-1 0.5'	Total/NA	Solid	8015B NM	3037
880-2126-2	S-1 1'	Total/NA	Solid	8015B NM	3037
880-2126-3	S-2 0.5'	Total/NA	Solid	8015B NM	3037
880-2126-4	S-2 1'	Total/NA	Solid	8015B NM	3037
880-2126-5	S-3 0.5'	Total/NA	Solid	8015B NM	3037
880-2126-6	S-3 1'	Total/NA	Solid	8015B NM	3037
880-2126-7	S-4 0.5'	Total/NA	Solid	8015B NM	3037
880-2126-8	S-4 1'	Total/NA	Solid	8015B NM	3037
880-2126-9	S-5 0.5'	Total/NA	Solid	8015B NM	3037
880-2126-10	S-5 1'	Total/NA	Solid	8015B NM	3037
880-2126-11	S-6 0.5'	Total/NA	Solid	8015B NM	3037
880-2126-12	S-6 1'	Total/NA	Solid	8015B NM	3037
880-2126-13	S-7 0.5'	Total/NA	Solid	8015B NM	3037
880-2126-14	S-7 1'	Total/NA	Solid	8015B NM	3037
880-2126-15	S-8 0.5'	Total/NA	Solid	8015B NM	3037
880-2126-16	S-8 1'	Total/NA	Solid	8015B NM	3037
880-2126-17	S-9 0.5'	Total/NA	Solid	8015B NM	3037
880-2126-18	S-9 1'	Total/NA	Solid	8015B NM	3037
MB 880-3037/1-A	Method Blank	Total/NA	Solid	8015B NM	3037
LCS 880-3037/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3037
LCSD 880-3037/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3037
880-2126-1 MS	S-1 0.5'	Total/NA	Solid	8015B NM	3037
880-2126-1 MSD	S-1 0.5'	Total/NA	Solid	8015B NM	3037

Prep Batch: 3037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2126-1	S-1 0.5'	Total/NA	Solid	8015NM Prep	
880-2126-2	S-1 1'	Total/NA	Solid	8015NM Prep	
880-2126-3	S-2 0.5'	Total/NA	Solid	8015NM Prep	
880-2126-4	S-2 1'	Total/NA	Solid	8015NM Prep	
880-2126-5	S-3 0.5'	Total/NA	Solid	8015NM Prep	
880-2126-6	S-3 1'	Total/NA	Solid	8015NM Prep	
880-2126-7	S-4 0.5'	Total/NA	Solid	8015NM Prep	
880-2126-8	S-4 1'	Total/NA	Solid	8015NM Prep	
880-2126-9	S-5 0.5'	Total/NA	Solid	8015NM Prep	
880-2126-10	S-5 1'	Total/NA	Solid	8015NM Prep	
880-2126-11	S-6 0.5'	Total/NA	Solid	8015NM Prep	
880-2126-12	S-6 1'	Total/NA	Solid	8015NM Prep	
880-2126-13	S-7 0.5'	Total/NA	Solid	8015NM Prep	
880-2126-14	S-7 1'	Total/NA	Solid	8015NM Prep	
880-2126-15	S-8 0.5'	Total/NA	Solid	8015NM Prep	
880-2126-16	S-8 1'	Total/NA	Solid	8015NM Prep	
880-2126-17	S-9 0.5'	Total/NA	Solid	8015NM Prep	
880-2126-18	S-9 1'	Total/NA	Solid	8015NM Prep	
MB 880-3037/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3037/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3037/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-2126-1 MS	S-1 0.5'	Total/NA	Solid	8015NM Prep	
880-2126-1 MSD	S-1 0.5'	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

HPLC/IC

Leach Batch: 3054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2126-1	S-1 0.5'	Soluble	Solid	DI Leach	
880-2126-2	S-1 1'	Soluble	Solid	DI Leach	
880-2126-3	S-2 0.5'	Soluble	Solid	DI Leach	
880-2126-4	S-2 1'	Soluble	Solid	DI Leach	
880-2126-5	S-3 0.5'	Soluble	Solid	DI Leach	
880-2126-6	S-3 1'	Soluble	Solid	DI Leach	
880-2126-7	S-4 0.5'	Soluble	Solid	DI Leach	
880-2126-8	S-4 1'	Soluble	Solid	DI Leach	
880-2126-9	S-5 0.5'	Soluble	Solid	DI Leach	
880-2126-10	S-5 1'	Soluble	Solid	DI Leach	
880-2126-11	S-6 0.5'	Soluble	Solid	DI Leach	
880-2126-12	S-6 1'	Soluble	Solid	DI Leach	
880-2126-13	S-7 0.5'	Soluble	Solid	DI Leach	
880-2126-14	S-7 1'	Soluble	Solid	DI Leach	
880-2126-15	S-8 0.5'	Soluble	Solid	DI Leach	
880-2126-16	S-8 1'	Soluble	Solid	DI Leach	
880-2126-17	S-9 0.5'	Soluble	Solid	DI Leach	
880-2126-18	S-9 1'	Soluble	Solid	DI Leach	
MB 880-3054/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3054/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3054/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-2126-1 MS	S-1 0.5'	Soluble	Solid	DI Leach	
880-2126-1 MSD	S-1 0.5'	Soluble	Solid	DI Leach	
880-2126-11 MS	S-6 0.5'	Soluble	Solid	DI Leach	
880-2126-11 MSD	S-6 0.5'	Soluble	Solid	DI Leach	

Analysis Batch: 3081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2126-1	S-1 0.5'	Soluble	Solid	300.0	3054
880-2126-2	S-1 1'	Soluble	Solid	300.0	3054
880-2126-3	S-2 0.5'	Soluble	Solid	300.0	3054
880-2126-4	S-2 1'	Soluble	Solid	300.0	3054
880-2126-5	S-3 0.5'	Soluble	Solid	300.0	3054
880-2126-6	S-3 1'	Soluble	Solid	300.0	3054
880-2126-7	S-4 0.5'	Soluble	Solid	300.0	3054
880-2126-8	S-4 1'	Soluble	Solid	300.0	3054
880-2126-9	S-5 0.5'	Soluble	Solid	300.0	3054
880-2126-10	S-5 1'	Soluble	Solid	300.0	3054
880-2126-11	S-6 0.5'	Soluble	Solid	300.0	3054
880-2126-12	S-6 1'	Soluble	Solid	300.0	3054
880-2126-13	S-7 0.5'	Soluble	Solid	300.0	3054
880-2126-14	S-7 1'	Soluble	Solid	300.0	3054
880-2126-15	S-8 0.5'	Soluble	Solid	300.0	3054
880-2126-16	S-8 1'	Soluble	Solid	300.0	3054
880-2126-17	S-9 0.5'	Soluble	Solid	300.0	3054
880-2126-18	S-9 1'	Soluble	Solid	300.0	3054
MB 880-3054/1-A	Method Blank	Soluble	Solid	300.0	3054
LCS 880-3054/2-A	Lab Control Sample	Soluble	Solid	300.0	3054
LCSD 880-3054/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3054
880-2126-1 MS	S-1 0.5'	Soluble	Solid	300.0	3054
880-2126-1 MSD	S-1 0.5'	Soluble	Solid	300.0	3054

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

HPLC/IC (Continued)

Analysis Batch: 3081 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2126-11 MS	S-6 0.5'	Soluble	Solid	300.0	3054
880-2126-11 MSD	S-6 0.5'	Soluble	Solid	300.0	3054

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-1 0.5'

Lab Sample ID: 880-2126-1
Matrix: Solid
Date Collected: 05/11/21 12:00
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/12/21 19:36	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/12/21 20:47	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		20	3081	05/14/21 10:55	SC	XM

Client Sample ID: S-1 1'

Lab Sample ID: 880-2126-2
Matrix: Solid
Date Collected: 05/11/21 12:05
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/12/21 19:57	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/12/21 21:49	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		5	3081	05/13/21 19:22	SC	XM

Client Sample ID: S-2 0.5'

Lab Sample ID: 880-2126-3
Matrix: Solid
Date Collected: 05/11/21 12:10
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/12/21 20:17	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/12/21 22:10	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		10	3081	05/13/21 19:28	SC	XM

Client Sample ID: S-2 1'

Lab Sample ID: 880-2126-4
Matrix: Solid
Date Collected: 05/11/21 12:15
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/12/21 20:38	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/12/21 22:31	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		5	3081	05/13/21 19:33	SC	XM

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-3 0.5'

Lab Sample ID: 880-2126-5
Matrix: Solid
Date Collected: 05/11/21 12:20
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/12/21 20:58	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/12/21 22:59	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/13/21 19:48	SC	XM

Client Sample ID: S-3 1'

Lab Sample ID: 880-2126-6
Matrix: Solid
Date Collected: 05/11/21 12:22
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/12/21 21:19	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/12/21 23:30	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/13/21 19:53	SC	XM

Client Sample ID: S-4 0.5'

Lab Sample ID: 880-2126-7
Matrix: Solid
Date Collected: 05/11/21 12:25
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/12/21 21:39	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 00:02	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/13/21 19:59	SC	XM

Client Sample ID: S-4 1'

Lab Sample ID: 880-2126-8
Matrix: Solid
Date Collected: 05/11/21 12:27
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/12/21 21:59	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 00:23	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/13/21 20:04	SC	XM

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-5 0.5'

Lab Sample ID: 880-2126-9
Matrix: Solid
Date Collected: 05/11/21 12:30
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/12/21 22:20	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 00:44	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/13/21 20:09	SC	XM

Client Sample ID: S-5 1'

Lab Sample ID: 880-2126-10
Matrix: Solid
Date Collected: 05/11/21 12:32
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/12/21 22:40	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 01:04	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/13/21 20:14	SC	XM

Client Sample ID: S-6 0.5'

Lab Sample ID: 880-2126-11
Matrix: Solid
Date Collected: 05/11/21 12:35
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/13/21 00:30	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 01:46	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/14/21 11:10	SC	XM

Client Sample ID: S-6 1'

Lab Sample ID: 880-2126-12
Matrix: Solid
Date Collected: 05/11/21 12:37
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/13/21 00:50	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 02:07	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/13/21 20:53	SC	XM

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-7 0.5'

Lab Sample ID: 880-2126-13
Matrix: Solid
Date Collected: 05/11/21 12:40
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/13/21 01:10	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 02:27	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/13/21 20:59	SC	XM

Client Sample ID: S-7 1'

Lab Sample ID: 880-2126-14
Matrix: Solid
Date Collected: 05/11/21 12:42
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/13/21 01:31	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 02:48	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/13/21 21:14	SC	XM

Client Sample ID: S-8 0.5'

Lab Sample ID: 880-2126-15
Matrix: Solid
Date Collected: 05/11/21 12:48
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/13/21 01:51	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 03:09	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		10	3081	05/13/21 21:19	SC	XM

Client Sample ID: S-8 1'

Lab Sample ID: 880-2126-16
Matrix: Solid
Date Collected: 05/11/21 12:50
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/13/21 02:12	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 03:30	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		10	3081	05/13/21 21:24	SC	XM

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Client Sample ID: S-9 0.5'

Lab Sample ID: 880-2126-17
Matrix: Solid
Date Collected: 05/11/21 13:00
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/13/21 02:32	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 03:51	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/13/21 21:30	SC	XM

Client Sample ID: S-9 1'

Lab Sample ID: 880-2126-18
Matrix: Solid
Date Collected: 05/11/21 13:02
Date Received: 05/12/21 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3024	05/12/21 15:57	MR	XM
Total/NA	Analysis	8021B		1	3036	05/13/21 02:53	MR	XM
Total/NA	Prep	8015NM Prep			3037	05/12/21 16:07	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/13/21 04:12	AJ	XM
Soluble	Leach	DI Leach			3054	05/13/21 09:23	CH	XM
Soluble	Analysis	300.0		1	3081	05/13/21 21:35	SC	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

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: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

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

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:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: PERSEUS CTB

Job ID: 880-2126-1
SDG: 21-0100-21

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-2126-1	S-1 0.5'	Solid	05/11/21 12:00	05/12/21 15:30	0.5'
880-2126-2	S-1 1'	Solid	05/11/21 12:05	05/12/21 15:30	1'
880-2126-3	S-2 0.5'	Solid	05/11/21 12:10	05/12/21 15:30	0.5'
880-2126-4	S-2 1'	Solid	05/11/21 12:15	05/12/21 15:30	1'
880-2126-5	S-3 0.5'	Solid	05/11/21 12:20	05/12/21 15:30	0.5'
880-2126-6	S-3 1'	Solid	05/11/21 12:22	05/12/21 15:30	1'
880-2126-7	S-4 0.5'	Solid	05/11/21 12:25	05/12/21 15:30	0.5'
880-2126-8	S-4 1'	Solid	05/11/21 12:27	05/12/21 15:30	1'
880-2126-9	S-5 0.5'	Solid	05/11/21 12:30	05/12/21 15:30	0.5'
880-2126-10	S-5 1'	Solid	05/11/21 12:32	05/12/21 15:30	1'
880-2126-11	S-6 0.5'	Solid	05/11/21 12:35	05/12/21 15:30	0.5'
880-2126-12	S-6 1'	Solid	05/11/21 12:37	05/12/21 15:30	1'
880-2126-13	S-7 0.5'	Solid	05/11/21 12:40	05/12/21 15:30	0.5'
880-2126-14	S-7 1'	Solid	05/11/21 12:42	05/12/21 15:30	1'
880-2126-15	S-8 0.5'	Solid	05/11/21 12:48	05/12/21 15:30	0.5'
880-2126-16	S-8 1'	Solid	05/11/21 12:50	05/12/21 15:30	1'
880-2126-17	S-9 0.5'	Solid	05/11/21 13:00	05/12/21 15:30	0.5'
880-2126-18	S-9 1'	Solid	05/11/21 13:02	05/12/21 15:30	1'

2126

№1476

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
Data Reported to

880-2126 Chain of Custody

432-687-0901

DATE: 5/12/2021 PAGE 1 OF 2

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: ~~21-0100-21~~ Perseus CTB

LAI PROJECT #: 21-0100-21 COLLECTOR: DSG/MB

TRRP report? ☐ Yes ☒ No

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

TIME ZONE
Time zone/State: MST / NM

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	8081 PESTICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐	TCLP - METALS (RCRA) ☐	TCLP - PEST ☐ HERB ☐	TOTAL METALS (RCRA) ☐	LEAD - TOTAL ☐	RCI ☐	TDS ☐	pH ☐	EXPLOSIVES ☐	CHLORIDE ☒	FIELD NOTES
S1 0.5'		5/11/21	1200	S	1				X		X			X	X	X													X	
S-1 1'			1205																											
S-2 0.5'			1210																											
S-2 1'			1215																											
S-3 0.5'			1220																											
S-3 1'			1222																											
S-4 0.5'			1225																											
S-4 1'			1227																											
S-5 0.5			1230																											
S-5 1			1232																											
S-6 0.5'			1235																											
S-6 1'			1237																											
S 7 0.5'			1240																											
S-7 1'			1242																											
S-8 0.5'			1248																											

TOTAL 15

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
DSG	5/12/21 1530	K. Phillips
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 0/0.5 THERM# IR-8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL #
☒ HAND DELIVERED

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

№ 1477

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 5/12/2021 PAGE 2 OF 2
PO#: LAB WORK ORDER#:
PROJECT LOCATION OR NAME: Perseus CTB
LAI PROJECT #: 21-0100-21 COLLECTOR: DSG/MB

Data Reported to

TRRP report? ☐ Yes ☒ No

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

TIME ZONE
Time zone/State
MST/NM

PRESERVATION

ANALYSES

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	BTEX ☒ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	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 ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐			FIELD NOTES
S-8 1'		5/11/21	1250	S	1				X		X		X	X	X													X			
S-9 0.5'		ǀ	1300	ǀ	ǀ				ǀ		ǀ		ǀ	ǀ	ǀ													ǀ			
S-9 1'		ǀ	1302	ǀ	ǀ				ǀ		ǀ		ǀ	ǀ	ǀ													ǀ			

TOTAL 3

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
[signature]	5/12/21 1530	[signature]
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)

LABORATORY Xenco

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

LABORATORY USE ONLY:
RECEIVING TEMP 0/0.5 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL #
☒ HAND DELIVERED

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-2126-1
SDG Number: 21-0100-21

Login Number: 2126
List Number: 1
Creator: Phillips, Kerianna

List Source: Eurofins Midland

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

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-7229-1
Laboratory Sample Delivery Group: 21-0100-21
Client Project/Site: Perseus
Revision: 1

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

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
10/25/2021 2:06:24 PM

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

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

Laboratory Job ID: 880-7229-1
SDG: 21-0100-21

Table of Contents

Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-7229-1
Project/Site: Perseus SDG: 21-0100-21

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, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

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

Job ID: 880-7229-1
SDG: 21-0100-21

Job ID: 880-7229-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-7229-1

Comments
No additional comments.

Revision
The report being provided is a revision of the original report sent on 10/22/2021. The report (revision 1) is being revised to correct the result for Total TPH and correct the sampling depth for S2 per Robert Nelson (phone).

Receipt
The samples were received on 10/14/2021 8:45 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 -2.2º C.

Receipt Exceptions

The report was revised to correct the result for Total TPH and correct the sampling depth for S2 per Robert Nelson (phone).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: S-8 5' (880-7229-6), S-1 5' (880-7229-10), S-1 8' (880-7229-11), S-2 1' (880-7229-12), S-2 3' (880-7229-13), S-2 5' (880-7229-14) and S-2 7' (880-7229-15). Evidence of matrix interferences is not obvious.

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

GC Semi VOA
Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (890-1428-A-3-C), (890-1428-A-3-D MS) and (890-1428-A-3-E MSD). Evidence of matrix interferences is not obvious.

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

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

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

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

Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-3 1'

Date Collected: 10/13/21 11:15
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 18:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 18:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 18:25	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		10/18/21 14:13	10/20/21 18:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 18:25	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/18/21 14:13	10/20/21 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*10/18/21 14:13*	*10/20/21 18:25*	*1*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*10/18/21 14:13*	*10/20/21 18:25*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 17:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 17:20	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*103*		*70 - 130*	*10/20/21 10:56*	*10/20/21 17:20*	*1*
o-Terphenyl (Surr)	*123*		*70 - 130*	*10/20/21 10:56*	*10/20/21 17:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.93**	**F1**	4.95		mg/Kg			10/22/21 11:10	1

Client Sample ID: S-3 3'

Date Collected: 10/13/21 11:16
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 18:46	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 18:46	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 18:46	1
m,p-Xylenes	<0.00404	U	0.00404		mg/Kg		10/18/21 14:13	10/20/21 18:46	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 18:46	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		10/18/21 14:13	10/20/21 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*	*10/18/21 14:13*	*10/20/21 18:46*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*10/18/21 14:13*	*10/20/21 18:46*	*1*

Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-3 3'
Date Collected: 10/13/21 11:16
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-2
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 13:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 13:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*110*		*70 - 130*	*10/20/21 10:56*	*10/20/21 13:49*	*1*
o-Terphenyl (Surr)	*127*		*70 - 130*	*10/20/21 10:56*	*10/20/21 13:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26.6**		5.03		mg/Kg			10/22/21 11:31	1

Client Sample ID: S-3 5'
Date Collected: 10/13/21 11:17
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		10/18/21 14:13	10/20/21 19:06	1
Toluene	<0.00198	U	0.00198		mg/Kg		10/18/21 14:13	10/20/21 19:06	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		10/18/21 14:13	10/20/21 19:06	1
m,p-Xylenes	<0.00397	U	0.00397		mg/Kg		10/18/21 14:13	10/20/21 19:06	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		10/18/21 14:13	10/20/21 19:06	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		10/18/21 14:13	10/20/21 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*10/18/21 14:13*	*10/20/21 19:06*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*10/18/21 14:13*	*10/20/21 19:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 14:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 14:10	1

Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-3 5'
Date Collected: 10/13/21 11:17
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*98*		*70 - 130*	*10/20/21 10:56*	*10/20/21 14:10*	*1*
o-Terphenyl (Surr)	*117*		*70 - 130*	*10/20/21 10:56*	*10/20/21 14:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**54.0**		5.03		mg/Kg			10/22/21 11:38	1

Client Sample ID: S-8 1'
Date Collected: 10/13/21 11:30
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 19:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 19:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 19:27	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		10/18/21 14:13	10/20/21 19:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 19:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/18/21 14:13	10/20/21 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*	*10/18/21 14:13*	*10/20/21 19:27*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*10/18/21 14:13*	*10/20/21 19:27*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 14:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 14:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*99*		*70 - 130*	*10/20/21 10:56*	*10/20/21 14:32*	*1*
o-Terphenyl (Surr)	*120*		*70 - 130*	*10/20/21 10:56*	*10/20/21 14:32*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4970**		25.1		mg/Kg			10/22/21 11:45	5

Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-8 3'

Date Collected: 10/13/21 11:31
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-5
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		10/18/21 14:13	10/20/21 19:47	1
Toluene	<0.00198	U	0.00198		mg/Kg		10/18/21 14:13	10/20/21 19:47	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		10/18/21 14:13	10/20/21 19:47	1
m,p-Xylenes	<0.00397	U	0.00397		mg/Kg		10/18/21 14:13	10/20/21 19:47	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		10/18/21 14:13	10/20/21 19:47	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		10/18/21 14:13	10/20/21 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*10/18/21 14:13*	*10/20/21 19:47*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*10/18/21 14:13*	*10/20/21 19:47*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 14:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 14:52	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*100*		*70 - 130*	*10/20/21 10:56*	*10/20/21 14:52*	*1*
o-Terphenyl (Surr)	*119*		*70 - 130*	*10/20/21 10:56*	*10/20/21 14:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1510**		24.8		mg/Kg			10/22/21 11:51	5

Client Sample ID: S-8 5'

Date Collected: 10/13/21 11:32
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-6
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 21:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 21:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 21:09	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		10/18/21 14:13	10/20/21 21:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 21:09	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/18/21 14:13	10/20/21 21:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*10/18/21 14:13*	*10/20/21 21:09*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*10/18/21 14:13*	*10/20/21 21:09*	*1*

Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-8 5'
Date Collected: 10/13/21 11:32
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-6
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 15:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 15:14	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*99*		*70 - 130*	*10/20/21 10:56*	*10/20/21 15:14*	*1*
o-Terphenyl (Surr)	*119*		*70 - 130*	*10/20/21 10:56*	*10/20/21 15:14*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**880**		5.04		mg/Kg			10/22/21 12:12	1

Client Sample ID: S-8 6'
Date Collected: 10/13/21 11:33
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-7
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 21:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 21:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 21:29	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		10/18/21 14:13	10/20/21 21:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 21:29	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/18/21 14:13	10/20/21 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*135*	*S1+*	*70 - 130*	*10/18/21 14:13*	*10/20/21 21:29*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*10/18/21 14:13*	*10/20/21 21:29*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 15:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 15:35	1

Eurofins Xenco, Midland

Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-8 6'

Date Collected: 10/13/21 11:33
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*101*		*70 - 130*	*10/20/21 10:56*	*10/20/21 15:35*	*1*
o-Terphenyl (Surr)	*121*		*70 - 130*	*10/20/21 10:56*	*10/20/21 15:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**818**		4.99		mg/Kg			10/22/21 12:19	1

Client Sample ID: S-1 1'

Date Collected: 10/13/21 12:10
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-8
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 21:50	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 21:50	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 21:50	1
m,p-Xylenes	<0.00403	U	0.00403		mg/Kg		10/18/21 14:13	10/20/21 21:50	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 21:50	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		10/18/21 14:13	10/20/21 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*10/18/21 14:13*	*10/20/21 21:50*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*10/18/21 14:13*	*10/20/21 21:50*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 15:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 15:56	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*104*		*70 - 130*	*10/20/21 10:56*	*10/20/21 15:56*	*1*
o-Terphenyl (Surr)	*125*		*70 - 130*	*10/20/21 10:56*	*10/20/21 15:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**426**		4.97		mg/Kg			10/22/21 12:26	1

Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-1 3'

Date Collected: 10/13/21 12:11
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-9

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/18/21 14:13	10/20/21 22:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/18/21 14:13	10/20/21 22:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/18/21 14:13	10/20/21 22:10	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		10/18/21 14:13	10/20/21 22:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/18/21 14:13	10/20/21 22:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/18/21 14:13	10/20/21 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*10/18/21 14:13*	*10/20/21 22:10*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*10/18/21 14:13*	*10/20/21 22:10*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 16:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 16:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*102*		*70 - 130*	*10/20/21 10:56*	*10/20/21 16:17*	*1*
o-Terphenyl (Surr)	*123*		*70 - 130*	*10/20/21 10:56*	*10/20/21 16:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**526**		5.05		mg/Kg			10/22/21 12:33	1

Client Sample ID: S-1 5'

Date Collected: 10/13/21 12:12
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-10

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 22:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 22:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 22:31	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		10/18/21 14:13	10/20/21 22:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 22:31	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/18/21 14:13	10/20/21 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*10/18/21 14:13*	*10/20/21 22:31*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*10/18/21 14:13*	*10/20/21 22:31*	*1*

Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-1 5'
Date Collected: 10/13/21 12:12
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-10
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 16:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 16:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*102*		*70 - 130*	*10/20/21 10:56*	*10/20/21 16:38*	*1*
o-Terphenyl (Surr)	*124*		*70 - 130*	*10/20/21 10:56*	*10/20/21 16:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**332**		5.00		mg/Kg			10/22/21 12:40	1

Client Sample ID: S-1 8'
Date Collected: 10/13/21 12:13
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-11
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/18/21 14:13	10/20/21 22:51	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/18/21 14:13	10/20/21 22:51	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/18/21 14:13	10/20/21 22:51	1
m,p-Xylenes	<0.00402	U	0.00402		mg/Kg		10/18/21 14:13	10/20/21 22:51	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/18/21 14:13	10/20/21 22:51	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/18/21 14:13	10/20/21 22:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*10/18/21 14:13*	*10/20/21 22:51*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*10/18/21 14:13*	*10/20/21 22:51*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 12:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 12:45	1

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Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-1 8'
Date Collected: 10/13/21 12:13
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-11
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/20/21 10:56	10/20/21 12:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*102*		*70 - 130*	*10/20/21 10:56*	*10/20/21 12:45*	*1*
o-Terphenyl (Surr)	*123*		*70 - 130*	*10/20/21 10:56*	*10/20/21 12:45*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**333**		5.01		mg/Kg			10/22/21 12:47	1

Client Sample ID: S-2 1'
Date Collected: 10/13/21 12:30
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-12
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 23:11	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 23:11	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 23:11	1
m,p-Xylenes	<0.00404	U	0.00404		mg/Kg		10/18/21 14:13	10/20/21 23:11	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 23:11	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		10/18/21 14:13	10/20/21 23:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*10/18/21 14:13*	*10/20/21 23:11*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*10/18/21 14:13*	*10/20/21 23:11*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 17:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 17:42	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*103*		*70 - 130*	*10/20/21 10:56*	*10/20/21 17:42*	*1*
o-Terphenyl (Surr)	*123*		*70 - 130*	*10/20/21 10:56*	*10/20/21 17:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**143**		4.97		mg/Kg			10/22/21 14:09	1

Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-2 3'

Date Collected: 10/13/21 12:31
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-13

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 23:32	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 23:32	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 23:32	1
m,p-Xylenes	<0.00404	U	0.00404		mg/Kg		10/18/21 14:13	10/20/21 23:32	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/18/21 14:13	10/20/21 23:32	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		10/18/21 14:13	10/20/21 23:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*10/18/21 14:13*	*10/20/21 23:32*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*10/18/21 14:13*	*10/20/21 23:32*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/19/21 09:45	10/19/21 19:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/19/21 09:45	10/19/21 19:09	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/19/21 09:45	10/19/21 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*113*		*70 - 130*	*10/19/21 09:45*	*10/19/21 19:09*	*1*
o-Terphenyl (Surr)	*129*		*70 - 130*	*10/19/21 09:45*	*10/19/21 19:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4160**		25.0		mg/Kg			10/22/21 13:07	5

Client Sample ID: S-2 5'

Date Collected: 10/13/21 12:32
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-14

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 23:52	1
Toluene	**0.00307**		0.00200		mg/Kg		10/18/21 14:13	10/20/21 23:52	1
Ethylbenzene	**0.00272**		0.00200		mg/Kg		10/18/21 14:13	10/20/21 23:52	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		10/18/21 14:13	10/20/21 23:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 23:52	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/18/21 14:13	10/20/21 23:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*10/18/21 14:13*	*10/20/21 23:52*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*10/18/21 14:13*	*10/20/21 23:52*	*1*

Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-2 5'

Date Collected: 10/13/21 12:32
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-14

Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00579**		0.00399		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/19/21 09:45	10/19/21 19:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/19/21 09:45	10/19/21 19:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/19/21 09:45	10/19/21 19:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*98*		*70 - 130*	*10/19/21 09:45*	*10/19/21 19:31*	*1*
o-Terphenyl (Surr)	*112*		*70 - 130*	*10/19/21 09:45*	*10/19/21 19:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**430**		4.96		mg/Kg			10/22/21 13:14	1

Client Sample ID: S-2 7'

Date Collected: 10/13/21 12:33
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-15

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/21/21 00:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/21/21 00:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/21/21 00:13	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		10/18/21 14:13	10/21/21 00:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/21/21 00:13	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/18/21 14:13	10/21/21 00:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*10/18/21 14:13*	*10/21/21 00:13*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*10/18/21 14:13*	*10/21/21 00:13*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/21/21 17:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/21/21 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/19/21 09:45	10/19/21 19:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/19/21 09:45	10/19/21 19:52	1

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Client Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-2 7'

Date Collected: 10/13/21 12:33
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-15

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/19/21 09:45	10/19/21 19:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*113*		*70 - 130*	*10/19/21 09:45*	*10/19/21 19:52*	*1*
o-Terphenyl (Surr)	*128*		*70 - 130*	*10/19/21 09:45*	*10/19/21 19:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**496**		5.04		mg/Kg			10/22/21 13:35	1

Surrogate Summary

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

Job ID: 880-7229-1
SDG: 21-0100-21

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)
820-2232-A-45-B MS	Matrix Spike	123	106
820-2232-A-45-C MSD	Matrix Spike Duplicate	123	101
880-7229-1	S-3 1'	113	73
880-7229-2	S-3 3'	129	74
880-7229-3	S-3 5'	118	70
880-7229-4	S-8 1'	134 S1+	96
880-7229-5	S-8 3'	117	99
880-7229-6	S-8 5'	124	80
880-7229-6 MS	S-8 5'	106	95
880-7229-6 MSD	S-8 5'	107	88
880-7229-7	S-8 6'	135 S1+	96
880-7229-8	S-1 1'	110	72
880-7229-9	S-1 3'	114	68 S1-
880-7229-10	S-1 5'	130	79
880-7229-11	S-1 8'	111	77
880-7229-12	S-2 1'	112	71
880-7229-13	S-2 3'	113	97
880-7229-14	S-2 5'	127	96
880-7229-15	S-2 7'	116	72
LCS 880-9753/1-A	Lab Control Sample	105	99
LCS 880-9957/1-A	Lab Control Sample	105	95
LCSD 880-9753/2-A	Lab Control Sample Dup	112	102
LCSD 880-9957/2-A	Lab Control Sample Dup	109	89
MB 880-10041/5-A	Method Blank	106	99
MB 880-9753/5-A	Method Blank	106	94
MB 880-9957/5-A	Method Blank	128	107

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)
880-7229-1	S-3 1'	103	123
880-7229-2	S-3 3'	110	127
880-7229-3	S-3 5'	98	117
880-7229-4	S-8 1'	99	120
880-7229-5	S-8 3'	100	119
880-7229-6	S-8 5'	99	119
880-7229-7	S-8 6'	101	121
880-7229-8	S-1 1'	104	125
880-7229-9	S-1 3'	102	123
880-7229-10	S-1 5'	102	124
880-7229-11	S-1 8'	102	123
880-7229-11 MS	S-1 8'	110	117
880-7229-11 MSD	S-1 8'	108	118

Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-7229-1
Project/Site: Perseus SDG: 21-0100-21

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-7229-12	S-2 1'	103	123
880-7229-13	S-2 3'	113	129
880-7229-14	S-2 5'	98	112
880-7229-15	S-2 7'	113	128
890-1428-A-3-D MS	Matrix Spike	312 S1+	215 S1+
890-1428-A-3-E MSD	Matrix Spike Duplicate	268 S1+	203 S1+
LCS 880-9834/2-A	Lab Control Sample	94	96
LCS 880-9955/2-A	Lab Control Sample	105	119
LCSD 880-9834/3-A	Lab Control Sample Dup	86	89
LCSD 880-9955/3-A	Lab Control Sample Dup	102	113
MB 880-9834/1-A	Method Blank	101	116
MB 880-9955/1-A	Method Blank	106	130

Surrogate Legend

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

QC Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-10041/5-A
Matrix: Solid
Analysis Batch: 10083

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10041

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/21/21 10:15	10/21/21 15:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/21/21 10:15	10/21/21 15:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/21/21 10:15	10/21/21 15:47	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		10/21/21 10:15	10/21/21 15:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/21/21 10:15	10/21/21 15:47	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/21/21 10:15	10/21/21 15:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*10/21/21 10:15*	*10/21/21 15:47*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*10/21/21 10:15*	*10/21/21 15:47*	*1*

Lab Sample ID: MB 880-9753/5-A
Matrix: Solid
Analysis Batch: 9941

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9753

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 16:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 16:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 16:22	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		10/18/21 14:13	10/20/21 16:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/18/21 14:13	10/20/21 16:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/18/21 14:13	10/20/21 16:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*10/18/21 14:13*	*10/20/21 16:22*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*10/18/21 14:13*	*10/20/21 16:22*	*1*

Lab Sample ID: LCS 880-9753/1-A
Matrix: Solid
Analysis Batch: 9941

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9753

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09216		mg/Kg		92	70 - 130		
Toluene			0.100	0.09030		mg/Kg		90	70 - 130		
Ethylbenzene			0.100	0.08762		mg/Kg		88	70 - 130		
m,p-Xylenes			0.200	0.1908		mg/Kg		95	70 - 130		
o-Xylene			0.100	0.09524		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-9753/2-A
Matrix: Solid
Analysis Batch: 9941

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9753

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09667		mg/Kg		97	70 - 130	5	35

QC Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

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

Lab Sample ID: LCSD 880-9753/2-A
Matrix: Solid
Analysis Batch: 9941

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9753

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.09542		mg/Kg		95	70 - 130	6	35
Ethylbenzene			0.100	0.09422		mg/Kg		94	70 - 130	7	35
m,p-Xylenes			0.200	0.2061		mg/Kg		103	70 - 130	8	35
o-Xylene			0.100	0.1022		mg/Kg		102	70 - 130	7	35

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

Lab Sample ID: 820-2232-A-45-B MS
Matrix: Solid
Analysis Batch: 9941

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 9753

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00202	U	0.101	0.07281		mg/Kg		72	70 - 130
Toluene	<0.00202	U F1	0.101	0.06977	F1	mg/Kg		69	70 - 130
Ethylbenzene	<0.00202	U	0.101	0.07075		mg/Kg		70	70 - 130
m,p-Xylenes	<0.00403	U	0.202	0.1558		mg/Kg		77	70 - 130
o-Xylene	<0.00202	U	0.101	0.07831		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 820-2232-A-45-C MSD
Matrix: Solid
Analysis Batch: 9941

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 9753

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.101	0.07730		mg/Kg		77	70 - 130	6	35
Toluene	<0.00202	U F1	0.101	0.07622		mg/Kg		76	70 - 130	9	35
Ethylbenzene	<0.00202	U	0.101	0.07873		mg/Kg		78	70 - 130	11	35
m,p-Xylenes	<0.00403	U	0.201	0.1722		mg/Kg		86	70 - 130	10	35
o-Xylene	<0.00202	U	0.101	0.08702		mg/Kg		87	70 - 130	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: MB 880-9957/5-A
Matrix: Solid
Analysis Batch: 10083

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9957

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/21/21 10:00	10/22/21 02:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/21/21 10:00	10/22/21 02:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/21/21 10:00	10/22/21 02:38	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		10/21/21 10:00	10/22/21 02:38	1

QC Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

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

Lab Sample ID: MB 880-9957/5-A
Matrix: Solid
Analysis Batch: 10083

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9957

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/21/21 10:00	10/22/21 02:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/21/21 10:00	10/22/21 02:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*10/21/21 10:00*	*10/22/21 02:38*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*10/21/21 10:00*	*10/22/21 02:38*	*1*

Lab Sample ID: LCS 880-9957/1-A
Matrix: Solid
Analysis Batch: 10083

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9957

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08846		mg/Kg		88	70 - 130		
Toluene			0.100	0.09078		mg/Kg		91	70 - 130		
Ethylbenzene			0.100	0.08864		mg/Kg		89	70 - 130		
m,p-Xylenes			0.200	0.1871		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09257		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-9957/2-A
Matrix: Solid
Analysis Batch: 10083

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9957

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08499		mg/Kg		85	70 - 130	4	35
Toluene			0.100	0.08920		mg/Kg		89	70 - 130	2	35
Ethylbenzene			0.100	0.08834		mg/Kg		88	70 - 130	0	35
m,p-Xylenes			0.200	0.1877		mg/Kg		94	70 - 130	0	35
o-Xylene			0.100	0.09315		mg/Kg		93	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-7229-6 MS
Matrix: Solid
Analysis Batch: 10083

Client Sample ID: S-8 5'
Prep Type: Total/NA
Prep Batch: 9957

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U	0.0998	0.08667		mg/Kg		87	70 - 130		
Toluene	<0.00199	U	0.0998	0.08829		mg/Kg		88	70 - 130		
Ethylbenzene	<0.00199	U	0.0998	0.08859		mg/Kg		89	70 - 130		
m,p-Xylenes	<0.00398	U	0.200	0.1869		mg/Kg		94	70 - 130		
o-Xylene	<0.00199	U	0.0998	0.09235		mg/Kg		92	70 - 130		

QC Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

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

Lab Sample ID: 880-7229-6 MS
Matrix: Solid
Analysis Batch: 10083

Client Sample ID: S-8 5'
Prep Type: Total/NA
Prep Batch: 9957

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 880-7229-6 MSD
Matrix: Solid
Analysis Batch: 10083

Client Sample ID: S-8 5'
Prep Type: Total/NA
Prep Batch: 9957

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.101	0.07819		mg/Kg		78	70 - 130	10	35
Toluene	<0.00199	U	0.101	0.08150		mg/Kg		81	70 - 130	8	35
Ethylbenzene	<0.00199	U	0.101	0.08171		mg/Kg		81	70 - 130	8	35
m,p-Xylenes	<0.00398	U	0.201	0.1744		mg/Kg		87	70 - 130	7	35
o-Xylene	<0.00199	U	0.101	0.08603		mg/Kg		85	70 - 130	7	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	88		70 - 130

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

Lab Sample ID: MB 880-9834/1-A
Matrix: Solid
Analysis Batch: 9827

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9834

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		10/19/21 09:45	10/19/21 10:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/19/21 09:45	10/19/21 10:56	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/19/21 09:45	10/19/21 10:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	101		70 - 130	10/19/21 09:45	10/19/21 10:56	1
o-Terphenyl (Surr)	116		70 - 130	10/19/21 09:45	10/19/21 10:56	1

Lab Sample ID: LCS 880-9834/2-A
Matrix: Solid
Analysis Batch: 9827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9834

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	822.9		mg/Kg		82	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1015		mg/Kg		101	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	94		70 - 130
o-Terphenyl (Surr)	96		70 - 130

QC Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

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

Lab Sample ID: LCSD 880-9834/3-A
Matrix: Solid
Analysis Batch: 9827

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9834

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	825.7		mg/Kg		83	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	965.7		mg/Kg		97	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*86*		*70 - 130*
o-Terphenyl (Surr)	*89*		*70 - 130*

Lab Sample ID: 890-1428-A-3-D MS
Matrix: Solid
Analysis Batch: 9827

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 9834

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	3310		998	4234		mg/Kg		92	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*312*	*S1+*	*70 - 130*
o-Terphenyl (Surr)	*215*	*S1+*	*70 - 130*

Lab Sample ID: 890-1428-A-3-E MSD
Matrix: Solid
Analysis Batch: 9827

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 9834

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	3310		1000	4491		mg/Kg		118	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*268*	*S1+*	*70 - 130*
o-Terphenyl (Surr)	*203*	*S1+*	*70 - 130*

Lab Sample ID: MB 880-9955/1-A
Matrix: Solid
Analysis Batch: 9931

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9955

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		10/20/21 10:56	10/20/21 11:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 11:41	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/20/21 10:56	10/20/21 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*106*		*70 - 130*	*10/20/21 10:56*	*10/20/21 11:41*	*1*
o-Terphenyl (Surr)	*130*		*70 - 130*	*10/20/21 10:56*	*10/20/21 11:41*	*1*

QC Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

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

Lab Sample ID: LCS 880-9955/2-A
Matrix: Solid
Analysis Batch: 9931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9955

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1033		mg/Kg		103	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1164		mg/Kg		116	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*105*		*70 - 130*
o-Terphenyl (Surr)	*119*		*70 - 130*

Lab Sample ID: LCSD 880-9955/3-A
Matrix: Solid
Analysis Batch: 9931

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9955

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1045		mg/Kg		104	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1155		mg/Kg		116	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*102*		*70 - 130*
o-Terphenyl (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-7229-11 MS
Matrix: Solid
Analysis Batch: 9931

Client Sample ID: S-1 8'
Prep Type: Total/NA
Prep Batch: 9955

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	997	887.7		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	924.8		mg/Kg		93	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*110*		*70 - 130*
o-Terphenyl (Surr)	*117*		*70 - 130*

Lab Sample ID: 880-7229-11 MSD
Matrix: Solid
Analysis Batch: 9931

Client Sample ID: S-1 8'
Prep Type: Total/NA
Prep Batch: 9955

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	908.5		mg/Kg		91	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	944.2		mg/Kg		95	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*108*		*70 - 130*

QC Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

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

Lab Sample ID: 880-7229-11 MSD
Matrix: Solid
Analysis Batch: 9931

Client Sample ID: S-1 8'
Prep Type: Total/NA
Prep Batch: 9955

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl (Surr)	118		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-9767/1-A
Matrix: Solid
Analysis Batch: 10156

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			10/22/21 10:49	1

Lab Sample ID: LCS 880-9767/2-A
Matrix: Solid
Analysis Batch: 10156

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

Lab Sample ID: LCSD 880-9767/3-A
Matrix: Solid
Analysis Batch: 10156

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	253.8		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 880-7229-1 MS
Matrix: Solid
Analysis Batch: 10156

Client Sample ID: S-3 1'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	6.93	F1	248	285.7	F1	mg/Kg		113	90 - 110		

Lab Sample ID: 880-7229-1 MSD
Matrix: Solid
Analysis Batch: 10156

Client Sample ID: S-3 1'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.93	F1	248	268.9		mg/Kg		106	90 - 110	6	20

Lab Sample ID: 880-7229-11 MS
Matrix: Solid
Analysis Batch: 10156

Client Sample ID: S-1 8'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	333		251	580.8		mg/Kg		99	90 - 110		

QC Sample Results

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

Job ID: 880-7229-1
SDG: 21-0100-21

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-7229-11 MSD
Matrix: Solid
Analysis Batch: 10156

Client Sample ID: S-1 8'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	333		251	575.8		mg/Kg		97	90 - 110	1	20

QC Association Summary

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

Job ID: 880-7229-1
SDG: 21-0100-21

GC VOA

Prep Batch: 9753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-1	S-3 1'	Total/NA	Solid	5035	
880-7229-2	S-3 3'	Total/NA	Solid	5035	
880-7229-3	S-3 5'	Total/NA	Solid	5035	
880-7229-4	S-8 1'	Total/NA	Solid	5035	
880-7229-5	S-8 3'	Total/NA	Solid	5035	
880-7229-6	S-8 5'	Total/NA	Solid	5035	
880-7229-7	S-8 6'	Total/NA	Solid	5035	
880-7229-8	S-1 1'	Total/NA	Solid	5035	
880-7229-9	S-1 3'	Total/NA	Solid	5035	
880-7229-10	S-1 5'	Total/NA	Solid	5035	
880-7229-11	S-1 8'	Total/NA	Solid	5035	
880-7229-12	S-2 1'	Total/NA	Solid	5035	
880-7229-13	S-2 3'	Total/NA	Solid	5035	
880-7229-14	S-2 5'	Total/NA	Solid	5035	
880-7229-15	S-2 7'	Total/NA	Solid	5035	
MB 880-9753/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-9753/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-9753/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
820-2232-A-45-B MS	Matrix Spike	Total/NA	Solid	5035	
820-2232-A-45-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 9941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-1	S-3 1'	Total/NA	Solid	8021B	9753
880-7229-2	S-3 3'	Total/NA	Solid	8021B	9753
880-7229-3	S-3 5'	Total/NA	Solid	8021B	9753
880-7229-4	S-8 1'	Total/NA	Solid	8021B	9753
880-7229-5	S-8 3'	Total/NA	Solid	8021B	9753
880-7229-6	S-8 5'	Total/NA	Solid	8021B	9753
880-7229-7	S-8 6'	Total/NA	Solid	8021B	9753
880-7229-8	S-1 1'	Total/NA	Solid	8021B	9753
880-7229-9	S-1 3'	Total/NA	Solid	8021B	9753
880-7229-10	S-1 5'	Total/NA	Solid	8021B	9753
880-7229-11	S-1 8'	Total/NA	Solid	8021B	9753
880-7229-12	S-2 1'	Total/NA	Solid	8021B	9753
880-7229-13	S-2 3'	Total/NA	Solid	8021B	9753
880-7229-14	S-2 5'	Total/NA	Solid	8021B	9753
880-7229-15	S-2 7'	Total/NA	Solid	8021B	9753
MB 880-9753/5-A	Method Blank	Total/NA	Solid	8021B	9753
LCS 880-9753/1-A	Lab Control Sample	Total/NA	Solid	8021B	9753
LCSD 880-9753/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	9753
820-2232-A-45-B MS	Matrix Spike	Total/NA	Solid	8021B	9753
820-2232-A-45-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	9753

Prep Batch: 9957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-9957/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-9957/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-9957/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-7229-6 MS	S-8 5'	Total/NA	Solid	5035	
880-7229-6 MSD	S-8 5'	Total/NA	Solid	5035	

QC Association Summary

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

Job ID: 880-7229-1
SDG: 21-0100-21

GC VOA

Prep Batch: 10041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-10041/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 10083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-10041/5-A	Method Blank	Total/NA	Solid	8021B	10041
MB 880-9957/5-A	Method Blank	Total/NA	Solid	8021B	9957
LCS 880-9957/1-A	Lab Control Sample	Total/NA	Solid	8021B	9957
LCSD 880-9957/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	9957
880-7229-6 MS	S-8 5'	Total/NA	Solid	8021B	9957
880-7229-6 MSD	S-8 5'	Total/NA	Solid	8021B	9957

Analysis Batch: 10147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-1	S-3 1'	Total/NA	Solid	Total BTEX	
880-7229-2	S-3 3'	Total/NA	Solid	Total BTEX	
880-7229-3	S-3 5'	Total/NA	Solid	Total BTEX	
880-7229-4	S-8 1'	Total/NA	Solid	Total BTEX	
880-7229-5	S-8 3'	Total/NA	Solid	Total BTEX	
880-7229-6	S-8 5'	Total/NA	Solid	Total BTEX	
880-7229-7	S-8 6'	Total/NA	Solid	Total BTEX	
880-7229-8	S-1 1'	Total/NA	Solid	Total BTEX	
880-7229-9	S-1 3'	Total/NA	Solid	Total BTEX	
880-7229-10	S-1 5'	Total/NA	Solid	Total BTEX	
880-7229-11	S-1 8'	Total/NA	Solid	Total BTEX	
880-7229-12	S-2 1'	Total/NA	Solid	Total BTEX	
880-7229-13	S-2 3'	Total/NA	Solid	Total BTEX	
880-7229-14	S-2 5'	Total/NA	Solid	Total BTEX	
880-7229-15	S-2 7'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 9827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-13	S-2 3'	Total/NA	Solid	8015B NM	9834
880-7229-14	S-2 5'	Total/NA	Solid	8015B NM	9834
880-7229-15	S-2 7'	Total/NA	Solid	8015B NM	9834
MB 880-9834/1-A	Method Blank	Total/NA	Solid	8015B NM	9834
LCS 880-9834/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	9834
LCSD 880-9834/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	9834
890-1428-A-3-D MS	Matrix Spike	Total/NA	Solid	8015B NM	9834
890-1428-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	9834

Prep Batch: 9834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-13	S-2 3'	Total/NA	Solid	8015NM Prep	
880-7229-14	S-2 5'	Total/NA	Solid	8015NM Prep	
880-7229-15	S-2 7'	Total/NA	Solid	8015NM Prep	
MB 880-9834/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-9834/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-9834/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1428-A-3-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

QC Association Summary

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

Job ID: 880-7229-1
SDG: 21-0100-21

GC Semi VOA (Continued)

Prep Batch: 9834 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1428-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 9931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-1	S-3 1'	Total/NA	Solid	8015B NM	9955
880-7229-2	S-3 3'	Total/NA	Solid	8015B NM	9955
880-7229-3	S-3 5'	Total/NA	Solid	8015B NM	9955
880-7229-4	S-8 1'	Total/NA	Solid	8015B NM	9955
880-7229-5	S-8 3'	Total/NA	Solid	8015B NM	9955
880-7229-6	S-8 5'	Total/NA	Solid	8015B NM	9955
880-7229-7	S-8 6'	Total/NA	Solid	8015B NM	9955
880-7229-8	S-1 1'	Total/NA	Solid	8015B NM	9955
880-7229-9	S-1 3'	Total/NA	Solid	8015B NM	9955
880-7229-10	S-1 5'	Total/NA	Solid	8015B NM	9955
880-7229-11	S-1 8'	Total/NA	Solid	8015B NM	9955
880-7229-12	S-2 1'	Total/NA	Solid	8015B NM	9955
MB 880-9955/1-A	Method Blank	Total/NA	Solid	8015B NM	9955
LCS 880-9955/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	9955
LCSD 880-9955/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	9955
880-7229-11 MS	S-1 8'	Total/NA	Solid	8015B NM	9955
880-7229-11 MSD	S-1 8'	Total/NA	Solid	8015B NM	9955

Prep Batch: 9955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-1	S-3 1'	Total/NA	Solid	8015NM Prep	
880-7229-2	S-3 3'	Total/NA	Solid	8015NM Prep	
880-7229-3	S-3 5'	Total/NA	Solid	8015NM Prep	
880-7229-4	S-8 1'	Total/NA	Solid	8015NM Prep	
880-7229-5	S-8 3'	Total/NA	Solid	8015NM Prep	
880-7229-6	S-8 5'	Total/NA	Solid	8015NM Prep	
880-7229-7	S-8 6'	Total/NA	Solid	8015NM Prep	
880-7229-8	S-1 1'	Total/NA	Solid	8015NM Prep	
880-7229-9	S-1 3'	Total/NA	Solid	8015NM Prep	
880-7229-10	S-1 5'	Total/NA	Solid	8015NM Prep	
880-7229-11	S-1 8'	Total/NA	Solid	8015NM Prep	
880-7229-12	S-2 1'	Total/NA	Solid	8015NM Prep	
MB 880-9955/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-9955/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-9955/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-7229-11 MS	S-1 8'	Total/NA	Solid	8015NM Prep	
880-7229-11 MSD	S-1 8'	Total/NA	Solid	8015NM Prep	

Analysis Batch: 10145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-1	S-3 1'	Total/NA	Solid	8015 NM	
880-7229-2	S-3 3'	Total/NA	Solid	8015 NM	
880-7229-3	S-3 5'	Total/NA	Solid	8015 NM	
880-7229-4	S-8 1'	Total/NA	Solid	8015 NM	
880-7229-5	S-8 3'	Total/NA	Solid	8015 NM	
880-7229-6	S-8 5'	Total/NA	Solid	8015 NM	
880-7229-7	S-8 6'	Total/NA	Solid	8015 NM	

QC Association Summary

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

Job ID: 880-7229-1
SDG: 21-0100-21

GC Semi VOA (Continued)

Analysis Batch: 10145 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-8	S-1 1'	Total/NA	Solid	8015 NM	
880-7229-9	S-1 3'	Total/NA	Solid	8015 NM	
880-7229-10	S-1 5'	Total/NA	Solid	8015 NM	
880-7229-11	S-1 8'	Total/NA	Solid	8015 NM	
880-7229-12	S-2 1'	Total/NA	Solid	8015 NM	
880-7229-13	S-2 3'	Total/NA	Solid	8015 NM	
880-7229-14	S-2 5'	Total/NA	Solid	8015 NM	
880-7229-15	S-2 7'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 9767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-1	S-3 1'	Soluble	Solid	DI Leach	
880-7229-2	S-3 3'	Soluble	Solid	DI Leach	
880-7229-3	S-3 5'	Soluble	Solid	DI Leach	
880-7229-4	S-8 1'	Soluble	Solid	DI Leach	
880-7229-5	S-8 3'	Soluble	Solid	DI Leach	
880-7229-6	S-8 5'	Soluble	Solid	DI Leach	
880-7229-7	S-8 6'	Soluble	Solid	DI Leach	
880-7229-8	S-1 1'	Soluble	Solid	DI Leach	
880-7229-9	S-1 3'	Soluble	Solid	DI Leach	
880-7229-10	S-1 5'	Soluble	Solid	DI Leach	
880-7229-11	S-1 8'	Soluble	Solid	DI Leach	
880-7229-12	S-2 1'	Soluble	Solid	DI Leach	
880-7229-13	S-2 3'	Soluble	Solid	DI Leach	
880-7229-14	S-2 5'	Soluble	Solid	DI Leach	
880-7229-15	S-2 7'	Soluble	Solid	DI Leach	
MB 880-9767/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-9767/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-9767/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-7229-1 MS	S-3 1'	Soluble	Solid	DI Leach	
880-7229-1 MSD	S-3 1'	Soluble	Solid	DI Leach	
880-7229-11 MS	S-1 8'	Soluble	Solid	DI Leach	
880-7229-11 MSD	S-1 8'	Soluble	Solid	DI Leach	

Analysis Batch: 10156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-1	S-3 1'	Soluble	Solid	300.0	9767
880-7229-2	S-3 3'	Soluble	Solid	300.0	9767
880-7229-3	S-3 5'	Soluble	Solid	300.0	9767
880-7229-4	S-8 1'	Soluble	Solid	300.0	9767
880-7229-5	S-8 3'	Soluble	Solid	300.0	9767
880-7229-6	S-8 5'	Soluble	Solid	300.0	9767
880-7229-7	S-8 6'	Soluble	Solid	300.0	9767
880-7229-8	S-1 1'	Soluble	Solid	300.0	9767
880-7229-9	S-1 3'	Soluble	Solid	300.0	9767
880-7229-10	S-1 5'	Soluble	Solid	300.0	9767
880-7229-11	S-1 8'	Soluble	Solid	300.0	9767
880-7229-12	S-2 1'	Soluble	Solid	300.0	9767
880-7229-13	S-2 3'	Soluble	Solid	300.0	9767

QC Association Summary

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

Job ID: 880-7229-1
SDG: 21-0100-21

HPLC/IC (Continued)

Analysis Batch: 10156 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7229-14	S-2 5'	Soluble	Solid	300.0	9767
880-7229-15	S-2 7'	Soluble	Solid	300.0	9767
MB 880-9767/1-A	Method Blank	Soluble	Solid	300.0	9767
LCS 880-9767/2-A	Lab Control Sample	Soluble	Solid	300.0	9767
LCSD 880-9767/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	9767
880-7229-1 MS	S-3 1'	Soluble	Solid	300.0	9767
880-7229-1 MSD	S-3 1'	Soluble	Solid	300.0	9767
880-7229-11 MS	S-1 8'	Soluble	Solid	300.0	9767
880-7229-11 MSD	S-1 8'	Soluble	Solid	300.0	9767

Lab Chronicle

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-3 1'
Date Collected: 10/13/21 11:15
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 18:25	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 17:20	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 11:10	CH	XEN MID

Client Sample ID: S-3 3'
Date Collected: 10/13/21 11:16
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 18:46	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 13:49	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 11:31	CH	XEN MID

Client Sample ID: S-3 5'
Date Collected: 10/13/21 11:17
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 19:06	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 14:10	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 11:38	CH	XEN MID

Client Sample ID: S-8 1'
Date Collected: 10/13/21 11:30
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 19:27	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID

Lab Chronicle

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-8 1'
Date Collected: 10/13/21 11:30
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 14:32	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		5			10156	10/22/21 11:45	CH	XEN MID

Client Sample ID: S-8 3'
Date Collected: 10/13/21 11:31
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 19:47	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 14:52	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		5			10156	10/22/21 11:51	CH	XEN MID

Client Sample ID: S-8 5'
Date Collected: 10/13/21 11:32
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 21:09	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 15:14	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 12:12	CH	XEN MID

Client Sample ID: S-8 6'
Date Collected: 10/13/21 11:33
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 21:29	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 15:35	AJ	XEN MID

Eurofins Xenco, Midland

Lab Chronicle

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-8 6'
Date Collected: 10/13/21 11:33
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 12:19	CH	XEN MID

Client Sample ID: S-1 1'
Date Collected: 10/13/21 12:10
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 21:50	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 15:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 12:26	CH	XEN MID

Client Sample ID: S-1 3'
Date Collected: 10/13/21 12:11
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 22:10	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 16:17	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 12:33	CH	XEN MID

Client Sample ID: S-1 5'
Date Collected: 10/13/21 12:12
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 22:31	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 16:38	AJ	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 12:40	CH	XEN MID

Lab Chronicle

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-1 8'
Date Collected: 10/13/21 12:13
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 22:51	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 12:45	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 12:47	CH	XEN MID

Client Sample ID: S-2 1'
Date Collected: 10/13/21 12:30
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 23:11	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	9955	10/20/21 10:56	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9931	10/20/21 17:42	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 14:09	CH	XEN MID

Client Sample ID: S-2 3'
Date Collected: 10/13/21 12:31
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 23:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	9834	10/19/21 09:45	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9827	10/19/21 19:09	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		5			10156	10/22/21 13:07	CH	XEN MID

Client Sample ID: S-2 5'
Date Collected: 10/13/21 12:32
Date Received: 10/14/21 08:45

Lab Sample ID: 880-7229-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/20/21 23:52	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID

Eurofins Xenco, Midland

Lab Chronicle

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

Job ID: 880-7229-1
SDG: 21-0100-21

Client Sample ID: S-2 5'

Lab Sample ID: 880-7229-14
Matrix: Solid
Date Collected: 10/13/21 12:32
Date Received: 10/14/21 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	9834	10/19/21 09:45	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9827	10/19/21 19:31	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 13:14	CH	XEN MID

Client Sample ID: S-2 7'

Lab Sample ID: 880-7229-15
Matrix: Solid
Date Collected: 10/13/21 12:33
Date Received: 10/14/21 08:45

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	9753	10/18/21 14:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9941	10/21/21 00:13	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			10147	10/21/21 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10145	10/21/21 16:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	9834	10/19/21 09:45	AJ	XEN MID
Total/NA	Analysis	8015B NM		1			9827	10/19/21 19:52	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	9767	10/18/21 14:24	CA	XEN MID
Soluble	Analysis	300.0		1			10156	10/22/21 13:35	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: 880-7229-1
Project/Site: Perseus SDG: 21-0100-21

Laboratory: Eurofins Xenco, Midland

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

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

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

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

Method Summary

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

Job ID: 880-7229-1
SDG: 21-0100-21

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

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

Job ID: 880-7229-1
SDG: 21-0100-21

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-7229-1	S-3 1'	Solid	10/13/21 11:15	10/14/21 08:45
880-7229-2	S-3 3'	Solid	10/13/21 11:16	10/14/21 08:45
880-7229-3	S-3 5'	Solid	10/13/21 11:17	10/14/21 08:45
880-7229-4	S-8 1'	Solid	10/13/21 11:30	10/14/21 08:45
880-7229-5	S-8 3'	Solid	10/13/21 11:31	10/14/21 08:45
880-7229-6	S-8 5'	Solid	10/13/21 11:32	10/14/21 08:45
880-7229-7	S-8 6'	Solid	10/13/21 11:33	10/14/21 08:45
880-7229-8	S-1 1'	Solid	10/13/21 12:10	10/14/21 08:45
880-7229-9	S-1 3'	Solid	10/13/21 12:11	10/14/21 08:45
880-7229-10	S-1 5'	Solid	10/13/21 12:12	10/14/21 08:45
880-7229-11	S-1 8'	Solid	10/13/21 12:13	10/14/21 08:45
880-7229-12	S-2 1'	Solid	10/13/21 12:30	10/14/21 08:45
880-7229-13	S-2 3'	Solid	10/13/21 12:31	10/14/21 08:45
880-7229-14	S-2 5'	Solid	10/13/21 12:32	10/14/21 08:45
880-7229-15	S-2 7'	Solid	10/13/21 12:33	10/14/21 08:45

No. 2154

CHAIN OF CUSTODY

1 OF 1

880-7229 Chain of Custody

Larson & Associates, Inc.
Environmental Consultants

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

Data Reported to

DATE 10-13-21

PO#

LAB WORK ORDER

PROJECT LOCATION OR NAME Perseus

LAI PROJECT # 21-0100-21

COLLECTOR TP & MB

TRRP report? ☐ Yes [✓ No]

TIME ZONE
Time zone/State: MST/NM

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

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	ICE	BTEX ✗ MTBE	TRPH 418.1 / TPH 1005 / TPH 1006	GASOLINE MOD 8015 ✗	DIESEL - MOD 8015 ✗	OIL - MOD 8015 ✗	CHLORIDE ✗	FIELD NOTES
S-3 1'		10/13/21	1115	S	1	X	X		X	X	X	X	
S-3 3'			1116										
S-3 5'			1117										
S-8 1'			1130										
S-8 3'			1131										
S-8 5'			1132										
S-8 6'			1133										
S-1 1'			1210										
S-1 3'			1211										
S-1 5'			1212										
S-1 8'			1213										
S-2 1'			1230										
S-2 3'			1231										
S-2 5'			1232										
S-2 7'			1233										

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

ANALYSES (other, unmarked): VOC 8260 ☐, SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐, 8081 PESTICIDES ☐ 8151 HERBICIDES ☐, 8082 PCBS ☐, TCLP - METALS (RCRA) ☐ TCLP VOC ☐, TCLP - PEST ☐ HERB ☐ Semi-VOC ☐, TOTAL METALS (RCRA) ☐ OTHER LIST ☐, LEAD - TOTAL ☐ D W 200 8 ☐ TCLP ☐, RCI ☐ TOX ☐ FLASHPOINT ☐, TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐, pH ☐ HEXAVALENT CHROMIUM ☐, EXPLOSIVES ☐ PECHLORATE ☐, ANIONS ☐ ALKALINITY ☐

TOTAL 15

RELINQUISHED BY (Signature) [illegible] DATE/TIME 0849 10/14/21

RECEIVED BY (Signature) [illegible] 10 14-21 0845

RELINQUISHED BY (Signature) DATE/TIME

RECEIVED BY (Signature)

RELINQUISHED BY (Signature) DATE/TIME

RECEIVED BY (Signature)

LABORATORY

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

LABORATORY USE ONLY:
RECEIVING TEMP 2.1/2.2 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-7229-1
SDG Number: 21-0100-21

Login Number: 7229
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland

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

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-9102-1
Laboratory Sample Delivery Group: 21-0100-21
Client Project/Site: Perseus CB

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

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
12/16/2021 1:54:43 PM

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: Perseus CB

Laboratory Job ID: 880-9102-1
SDG: 21-0100-21

Table of Contents

Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-9102-1
Project/Site: Perseus CB SDG: 21-0100-21

Qualifiers

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: Perseus CB

Job ID: 880-9102-1
SDG: 21-0100-21

Job ID: 880-9102-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-9102-1

Receipt
The samples were received on 12/8/2021 9:32 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -1.3°C

Per Robert Nelson the lab was instructed to run Cl only on all three samples.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-14488 and analytical batch 880-14573 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Perseus CB

Job ID: 880-9102-1
SDG: 21-0100-21

Client Sample ID: S-8,10'
Lab Sample ID: 880-9102-1
Date Collected: 12/07/21 10:56
Matrix: Solid
Date Received: 12/08/21 09:32

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	688	F1	4.95		mg/Kg			12/12/21 19:46	1

Client Sample ID: S-8,15'
Lab Sample ID: 880-9102-2
Date Collected: 12/07/21 11:08
Matrix: Solid
Date Received: 12/08/21 09:32

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	105		4.97		mg/Kg			12/15/21 22:49	1

Client Sample ID: S-8,20'
Lab Sample ID: 880-9102-3
Date Collected: 12/07/21 11:17
Matrix: Solid
Date Received: 12/08/21 09:32

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	61.6		4.98		mg/Kg			12/15/21 22:57	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Perseus CB

Job ID: 880-9102-1
SDG: 21-0100-21

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-14488/1-A
Matrix: Solid
Analysis Batch: 14573

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			12/12/21 19:26	1

Lab Sample ID: LCS 880-14488/2-A
Matrix: Solid
Analysis Batch: 14573

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	263.5		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-14488/3-A
Matrix: Solid
Analysis Batch: 14573

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	263.2		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 880-9102-1 MS
Matrix: Solid
Analysis Batch: 14573

Client Sample ID: S-8,10'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	688	F1	248	978.3	F1	mg/Kg		117	90 - 110		

Lab Sample ID: 880-9102-1 MSD
Matrix: Solid
Analysis Batch: 14573

Client Sample ID: S-8,10'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	688	F1	248	950.5		mg/Kg		106	90 - 110	3	20

Lab Sample ID: MB 880-14911/1-A
Matrix: Solid
Analysis Batch: 14925

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			12/15/21 20:59	1

Lab Sample ID: LCS 880-14911/2-A
Matrix: Solid
Analysis Batch: 14925

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	249.4		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-14911/3-A
Matrix: Solid
Analysis Batch: 14925

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	248.9		mg/Kg		100	90 - 110	0	20

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Perseus CB

Job ID: 880-9102-1
SDG: 21-0100-21

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-9379-A-1-B MS
Matrix: Solid
Analysis Batch: 14925

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	12300		5050	17280		mg/Kg		98	90 - 110		

Lab Sample ID: 880-9379-A-1-C MSD
Matrix: Solid
Analysis Batch: 14925

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	12300		5050	17290		mg/Kg		98	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Perseus CB

Job ID: 880-9102-1
SDG: 21-0100-21

HPLC/IC

Leach Batch: 14488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9102-1	S-8,10'	Soluble	Solid	DI Leach	
MB 880-14488/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-14488/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-14488/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-9102-1 MS	S-8,10'	Soluble	Solid	DI Leach	
880-9102-1 MSD	S-8,10'	Soluble	Solid	DI Leach	

Analysis Batch: 14573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9102-1	S-8,10'	Soluble	Solid	300.0	14488
MB 880-14488/1-A	Method Blank	Soluble	Solid	300.0	14488
LCS 880-14488/2-A	Lab Control Sample	Soluble	Solid	300.0	14488
LCSD 880-14488/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	14488
880-9102-1 MS	S-8,10'	Soluble	Solid	300.0	14488
880-9102-1 MSD	S-8,10'	Soluble	Solid	300.0	14488

Leach Batch: 14911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9102-2	S-8,15'	Soluble	Solid	DI Leach	
880-9102-3	S-8,20'	Soluble	Solid	DI Leach	
MB 880-14911/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-14911/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-14911/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-9379-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-9379-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 14925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9102-2	S-8,15'	Soluble	Solid	300.0	14911
880-9102-3	S-8,20'	Soluble	Solid	300.0	14911
MB 880-14911/1-A	Method Blank	Soluble	Solid	300.0	14911
LCS 880-14911/2-A	Lab Control Sample	Soluble	Solid	300.0	14911
LCSD 880-14911/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	14911
880-9379-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	14911
880-9379-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	14911

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Perseus CB

Job ID: 880-9102-1
SDG: 21-0100-21

Client Sample ID: S-8,10'

Lab Sample ID: 880-9102-1
Matrix: Solid
Date Collected: 12/07/21 10:56
Date Received: 12/08/21 09:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	14488	12/10/21 12:00	CH	XEN MID
Soluble	Analysis	300.0		1			14573	12/12/21 19:46	CH	XEN MID

Client Sample ID: S-8,15'

Lab Sample ID: 880-9102-2
Matrix: Solid
Date Collected: 12/07/21 11:08
Date Received: 12/08/21 09:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	14911	12/15/21 16:00	CH	XEN MID
Soluble	Analysis	300.0		1			14925	12/15/21 22:49	CH	XEN MID

Client Sample ID: S-8,20'

Lab Sample ID: 880-9102-3
Matrix: Solid
Date Collected: 12/07/21 11:17
Date Received: 12/08/21 09:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	14911	12/15/21 16:00	CH	XEN MID
Soluble	Analysis	300.0		1			14925	12/15/21 22:57	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Perseus CB

Job ID: 880-9102-1
SDG: 21-0100-21

Laboratory: Eurofins Xenco, Midland

The accreditations/certifications listed below are applicable to this report.

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

Method Summary

Client: Larson & Associates, Inc.
Project/Site: Perseus CB

Job ID: 880-9102-1
SDG: 21-0100-21

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	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.

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: Perseus CB

Job ID: 880-9102-1
SDG: 21-0100-21

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-9102-1	S-8,10'	Solid	12/07/21 10:56	12/08/21 09:32
880-9102-2	S-8,15'	Solid	12/07/21 11:08	12/08/21 09:32
880-9102-3	S-8,20'	Solid	12/07/21 11:17	12/08/21 09:32

No. 2288

9102 CHAIN-OF-CUSTODY

12/16/2021

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

Data Reported to

DATE 12/7/21 PAGE 1 OF 1

PO# LAB WORK ORDER#

PROJECT LOCATION OR NAME Perseus CB

LAI PROJECT # 21-0100-21 COLLECTOR RW

TRRP report? ☐ Yes [✓ No]

TIME ZONE
Time zone/State
MST/NM

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

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	BTEX ✓ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ✓	DIESEL - MOD 8015 ✓	OIL MOD 8015 ✓	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D W 200 8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ✓ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
S-8, 10'		12/7/21	1056	S	1				X		X		X	X	X													X	Analyze chloride to 600 mg/kg
S-8, 15'		|	1108	|	|				|		|		|	|	|													|	
S-8, 20'		|	1117	|	|				|		|		|	|	|													|	202

TOTAL 3 | 3

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
[illegible]	12/7/21 1706	Brenda Ballard
Brenda Ballard	12/8 932	[illegible]

LABORATORY Xenco

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

LABORATORY USE ONLY:
RECEIVING TEMP 1.2/1.3 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☑ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

880-9102 Chain of Custody

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-9102-1
SDG Number: 21-0100-21

Login Number: 9102
List Number: 1
Creator: Teel, Brianna

List Source: Eurofins Xenco, Midland

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

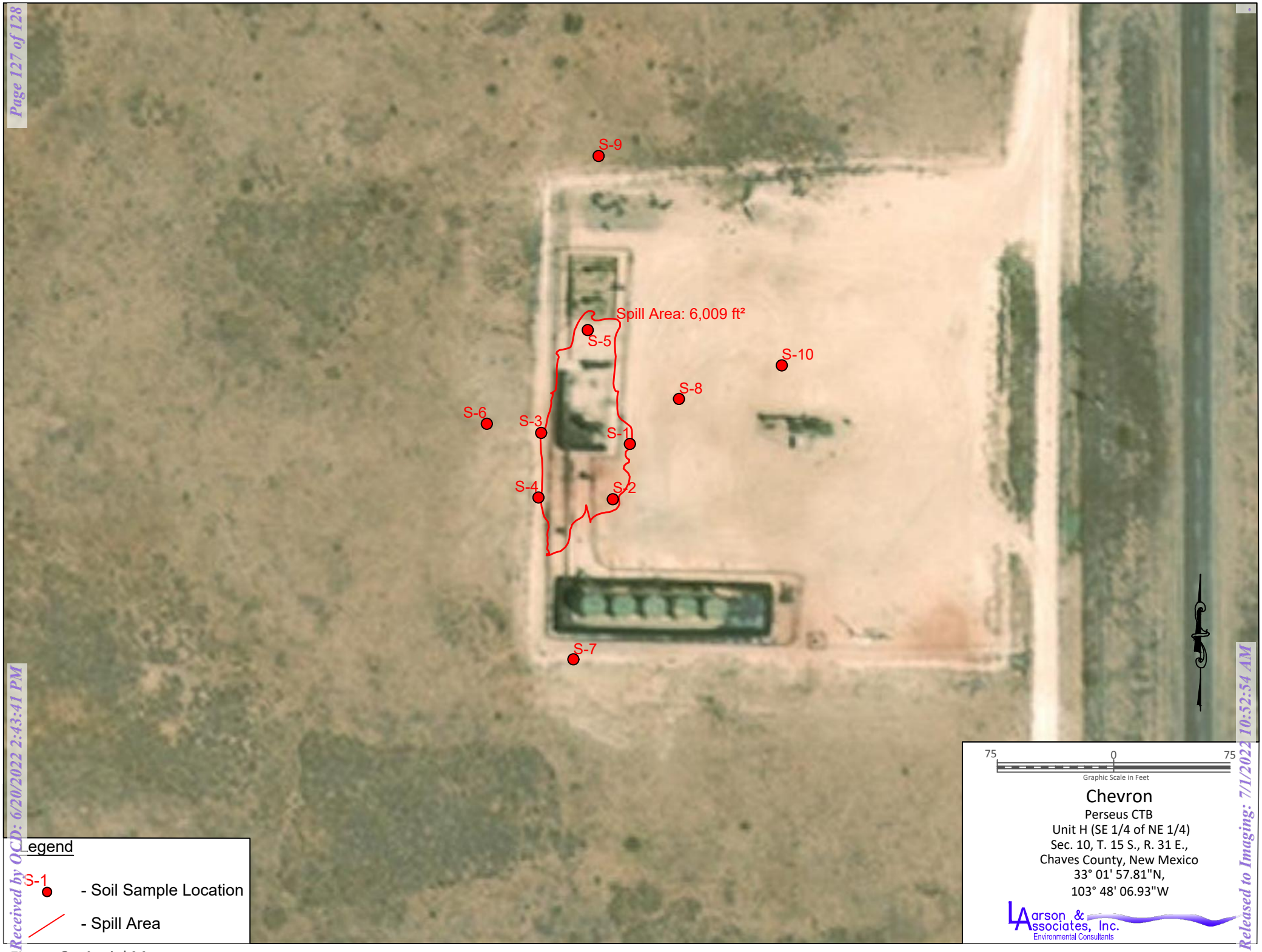

Figure 2 - Aerial Map

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

CONDITIONS

Action 118836

CONDITIONS

Operator: Talon LPE 408 W Texas Artesia, NM 88210	OGRID: 329944
	Action Number: 118836
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Remediation Plan Approved.	7/1/2022