

Incident ID	nCS2003139174
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	86.36 (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.

State of New Mexico
Oil Conservation Division

Page 4

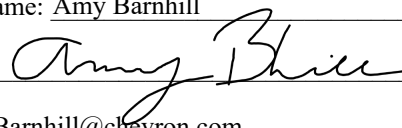
Incident ID	nCS2003139174
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Amy Barnhill

Title: Waste and Water Specialist

Signature:



Date: 4-1-21

email: ABarnhill@chevron.com

Telephone: 432-687-7108

OCD Only

Received by: _____

Date: _____

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Remediation Plan

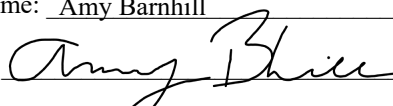
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

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

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

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

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

Printed Name: Amy Barnhill Title: Waste and Water Specialist
Signature:  Date: 4-1-21
email: ABarnhill@chevron.com Telephone: 432-687-7108

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Tracking Number: nCS2003139174
Delineation Report and Remediation Plan
Salado Draw Pad #10 Well 20H
Produced Water and Crude Oil Releases
Lea County, New Mexico

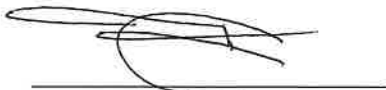
Latitude: N 32.021488°
Longitude: W -103.594331°

LAI Project No. 19-0180-02

March 17, 2021

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

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



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



Robert Nelson
Sr. Geoscientist

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Tracking Number: nCS2003139174
Delineation Report and Remediation Plan
Salado Draw Pad #10 Well 20H
Eddy County, New Mexico
March 17, 2021

1.0 INTRODUCTION

Larson & Associates, Inc. (LAI), has prepared this delineation report and remediation plan on behalf of Chevron USA Inc. (Chevron) for submittal to the New Mexico Oil Conservation Division (OCD) District I for a produced water and crude oil release at the Salado Draw Pad #10 Well 20H (Site) located in Unit C (NE/4, NW/4), Section 29, Township 26 South, Range 33 East, in Eddy County, New Mexico. The geodetic position is North 32.021488° and West -103.594331°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

On November 20, 2019, a produced water and crude oil release was discovered at the Well 20H, which resulted from equipment failure at the wellhead. Chevron reported that approximately 21 barrels (bbls) of produced water and 1 bbl of crude oil was released. Approximately 19 bbls of produced water were recovered. No crude oil was recovered. The affected area measures approximately 45,177 square feet. Chevron submitted the initial C-141 to the OCD District I. The release was assigned incident number nCS2003139174. Appendix A presents the initial C-141 and Chevron spill documentation.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,246 feet above mean sea level (msl).
- The surface topography gradually slopes to the southwest.
- There are no surface water features within 1,000 feet of the Site.
- Karst data provided by the USGS describes the Site as “Medium Risk” potential.
- The soils are designated as “Pyote and Maljamar fine sands / Pyote soils and dune land”, consisting of 30 inches of fine sand, underlain by 30 inches of fine sandy loam in descending order.
- The surface geology consists of the Quaternary-age sand and silt deposited in sheets that locally includes cover sand (USGS).
- Groundwater occurs at a depth of approximately 86.36 feet below ground surface (bgs) based on a depth to groundwater measurement take 72 hours after drilling a groundwater bore (GWB-1) to approximately 115 feet bgs on November 30, 2020.

Appendix B presents the boring log. Appendix C presents data depicting karst risk potential.

1.3 Remediation Levels

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

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

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

Tracking Number: nCS2003139174
 Delineation Report and Remediation Plan
 Salado Draw Pad #10 Well 20H
 Eddy County, New Mexico
 March 17, 2021

2.0 DELINEATION

On July 17, 2020, LAI personnel used a stainless-steel hand auger to collect soil samples from nine (9) locations inside the spill (S-1 through S-9) and in each cardinal direction of the spill (North, South, East, and West). The samples were collected between approximately ground surface 1-foot bgs. The soil samples were delivered under chain of custody and preservation to Xenco Laboratories (Xenco) in Midland, Texas, and were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C12), diesel range organics (>C12-C28) and oil range organics (>C28-C35), and chloride by EPA SW-846 Methods 8021B and 8015M, and M300, respectively. Figure 2 presents an aerial map showing the sample locations.

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

Sample ID	Depth (Feet)	TPH (mg/Kg)	Chloride (mg/Kg)
S-1	0 - 1	4,970	1,770
S-2	0 - 1	--	1,400
S-4	0 - 1	4,070	2,240
S-7	0 - 1	--	1,650
S-8	0 - 1	--	1,330
S-9	0 - 1	--	4,520

On August 5, 2020 and February 5, 2021, LAI personnel used a Geoprobe® 7822DT direct push rig to further delineate TPH and chloride at sample locations S-1, S-2, S-4, S-7 through S-10. Soil samples were collected at approximately one (1), three (3), five (5), and ten (10) feet bgs. Additionally, three (3) soil samples (S-11 through S-13) were collected to horizontally delineate the release. The samples were analyzed for BTEX, TPH, and chloride. The laboratory results demonstrate the release was delineated according to the OCD remediation and closure requirements (19.15.29.12 NMAC Table 1) for groundwater between 50 and 100 feet bgs.

3.0 REMEDIATION PLAN

Chevron proposes the following remedial actions:

- Excavate soil from an area measuring approximately 27,071 square feet, encompassing S-2, S-4, S-7, and S-9 to approximately 1.5 feet bgs.
 - Excavate soil from an area measuring approximately 2,792 square feet, encompassing S-8 to approximately 3 feet bgs.
 - Excavate soil from an area measuring approximately 15,314 square feet, encompassing S-1 and S-10 to approximately 4.1 feet bgs.
 - Collect five (5) point composite bottom and sidewall confirmation soil samples every 200 square feet of excavation and analyze for BTEX, TPH and chloride.
 - Backfill excavations with caliche confirmed clean by laboratory analysis assuming achievement of OCD remediation levels; and
 - Prepare combined report with photographs for submittal to OCD District 1.
- Figure 3 presents the proposed excavation areas.

Tables

Table 1
Delineation Soil Sample Analytical Data Summary
Chevron USA, SD Pad 10 Well 20H
Lea County, New Mexico
North West

Page 1 of 3

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				10	50	100 / 2,500 600 / 10,000				
S-1	0 - 1	7/17/2020	In-Situ	0.00211	0.0187	89.5	4,880	<50.0	4,970	1,770
	1	8/5/2020	In-Situ	<0.00200	<0.00200	95.0	4,540	<49.9	4,640	951
	3	8/5/2020	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	1,480
	5	8/5/2020	In-Situ	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	259
	7	8/5/2020	In-Situ	--	--	--	--	--	--	332
S-2	0 - 1	7/17/2020	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	1,400
	1	8/5/2020	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	1,090
	3	8/5/2020	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	293
	5	8/5/2020	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	218
S-3	0 - 1	7/17/2020	In-Situ	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	282
S-4	0 - 1	7/17/2020	In-Situ	<0.00202	0.0338	<49.8	4,070	<49.8	4,070	2,240
	1	8/5/2020	In-Situ	<0.00199	<0.00199	<50.0	581	<50.0	581	987
	3	8/5/2020	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	145
	5	8/5/2020	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	246
	7	8/5/2020	In-Situ	--	--	--	--	--	--	580
S-5	0 - 1	7/17/2020	In-Situ	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	32.7
S-6	0 - 1	7/17/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	11.1
S-7	0 - 1	7/17/2020	In-Situ	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	1,650
	1	8/5/2020	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	74.2

Table 1
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Chevron USA, SD Pad 10 Well 20H
Lea County, New Mexico
North West

Page 2 of 3

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				10	50	100 / 2,500 600 / 10,000				
	3	8/5/2020	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	38.5
	5	8/5/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	69.2
	7	8/5/2020	In-Situ	--	--	--	--	--	--	212
S-8	0-1	7/17/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	1,330
	1	8/5/2020	In-Situ	<0.00199	<0.00199	<49.8	268	<49.8	268	783
	3	8/5/2020	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	637
	5	8/5/2020	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	125
	7	8/5/2020	In-Situ	--	--	--	--	--	--	<5.00
S-9	0-1	7/17/2020	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	4,520
	1	8/5/2020	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	454
	3	8/5/2020	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	183
	5	8/5/2020	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	2,080
	10	8/5/2020	In-Situ	--	--	--	--	--	--	24.1
S-10	1	2/5/2021	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	5,270
	3	2/5/2021	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	5,010
	5	2/5/2021	In-Situ	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	1,430
	10	2/5/2021	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	61.0
S-11	0.5	2/5/2021	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	164.0
	1	2/5/2021 2/5/2021	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	49.5
S-12	0.5	2/5/2021	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	35.6
	1	2/5/2021	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	35.8
S-13	0.5	2/5/2021	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	20.8

Table 1
Delineation Soil Sample Analytical Data Summary
Chevron USA, SD Pad 10 Well 20H
Lea County, New Mexico
North West

Page 3 of 3

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				10	50	100 / 2,500 600 / 10,000				
	1	2/5/2021	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	32.7
S-7 (Well 18H)	0 - 1	10/21/2019	In-Situ	<0.00104	<0.00624	<26.0	<26.0	<26.0	<26.0	525.0

Notes: Analysis performed by Permian Basin Environmental Laboratory by EPA SW-846 Methods 8021B (BTEX), 8015M (TPH), and M300 (chloride)

Depth in feet below ground surface (bgs)

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

<: denotes concentration less than analytical method reporting limit

Bold and Highlighted exceeds OCD remediation levels

Figures

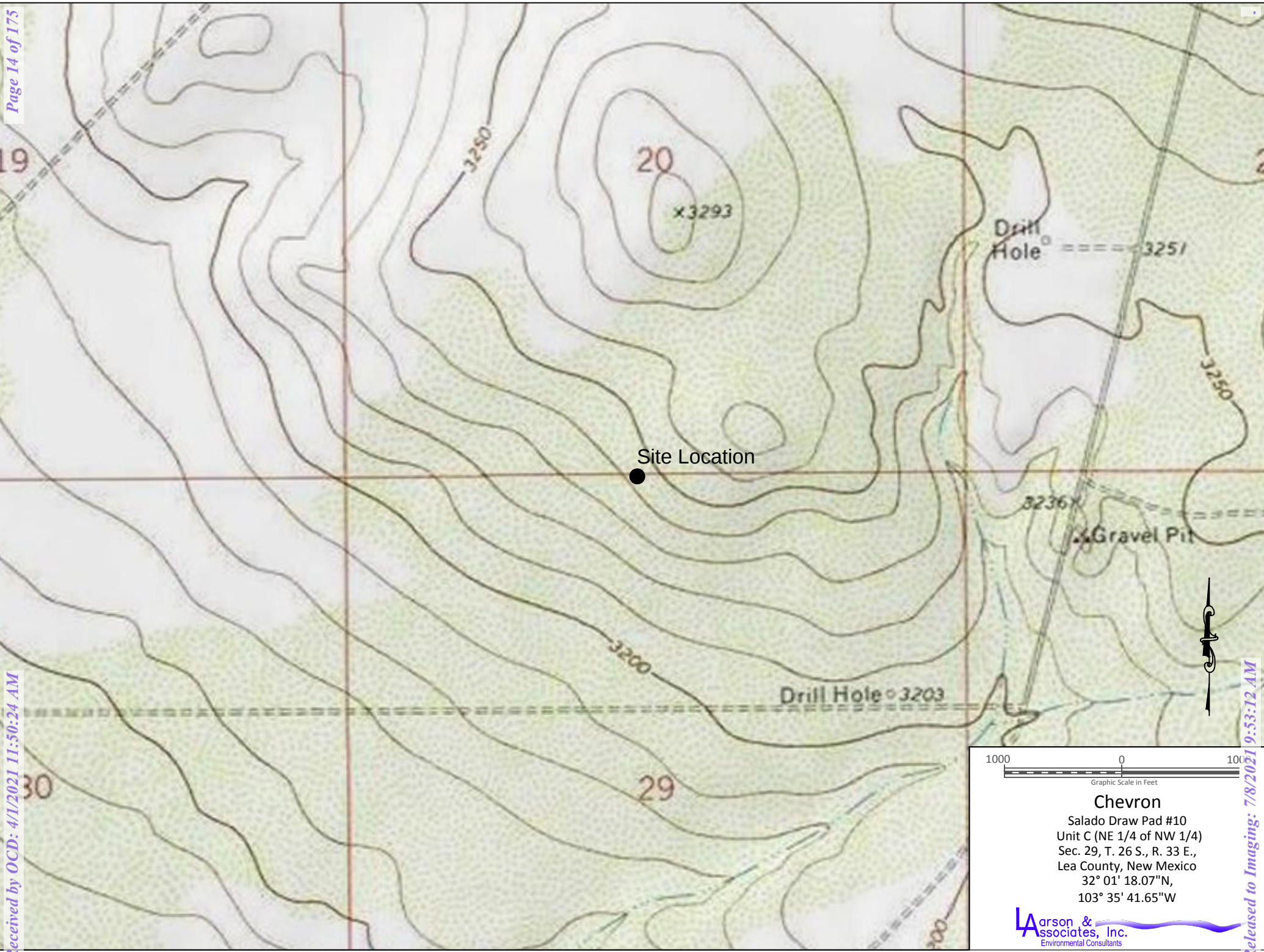
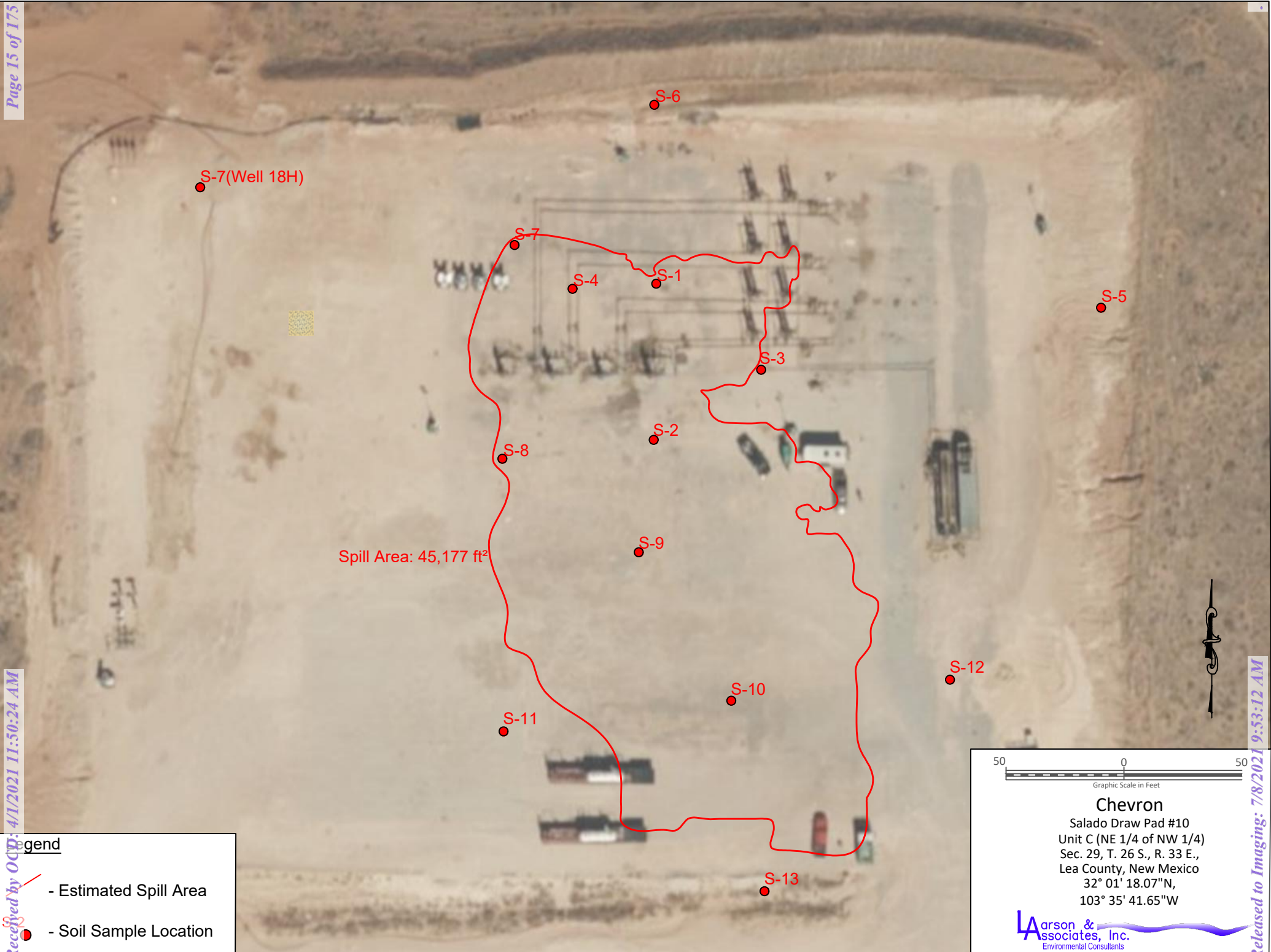


Figure 1 - Topographic Map

Chevron
Salado Draw Pad #10
Unit C (NE 1/4 of NW 1/4)
Sec. 29, T. 26 S., R. 33 E.,
Lea County, New Mexico
32° 01' 18.07"N,
103° 35' 41.65"W





Legend

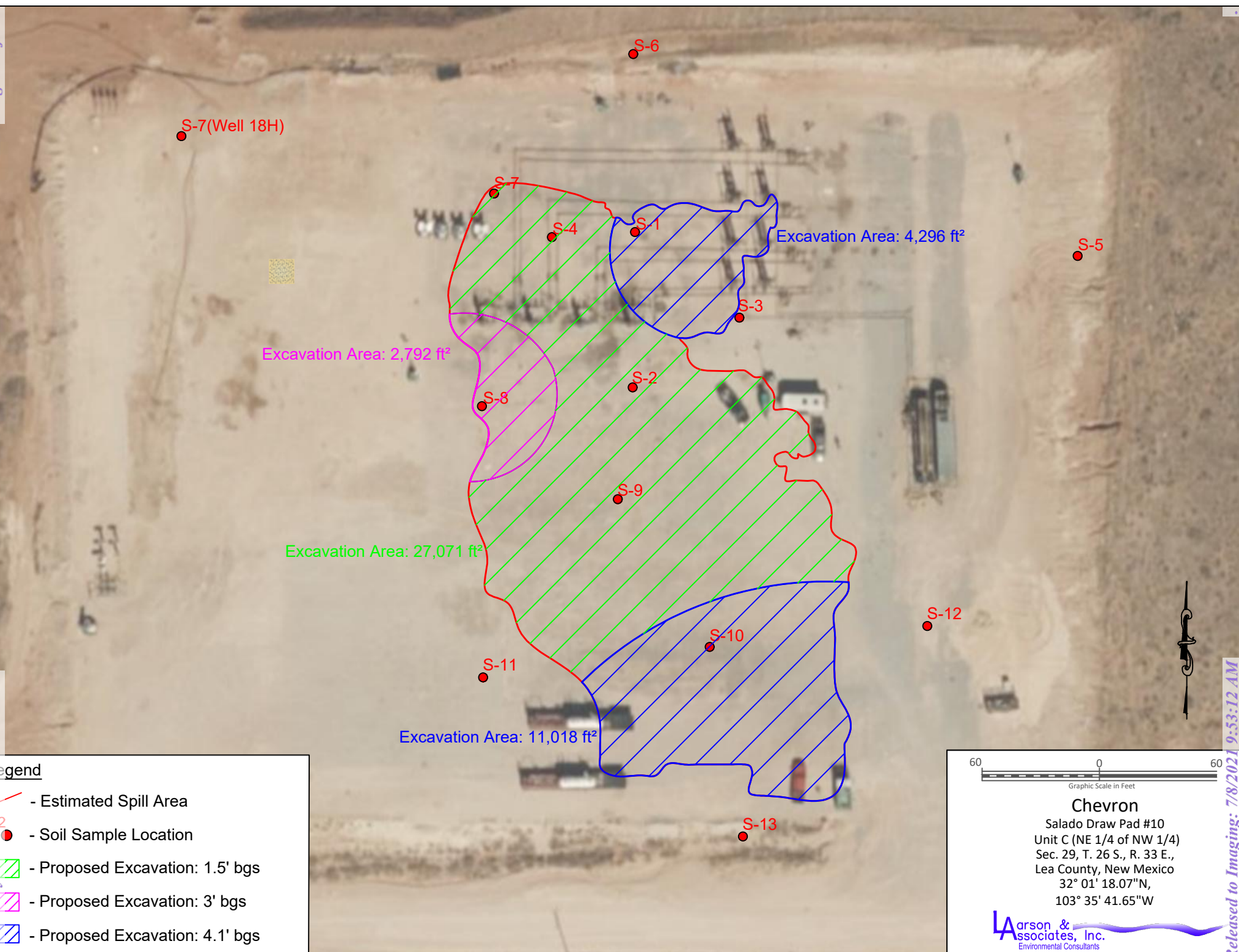
- Estimated Spill Area
- Soil Sample Location

50 0 50
Graphic Scale in Feet

Chevron
Salado Draw Pad #10
Unit C (NE 1/4 of NW 1/4)
Sec. 29, T. 26 S., R. 33 E.,
Lea County, New Mexico
32° 01' 18.07"N,
103° 35' 41.65"W

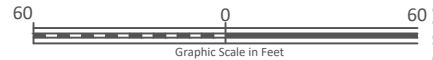
Larson & Associates, Inc.
Environmental Consultants

Figure 2 - Aerial Map



Legend

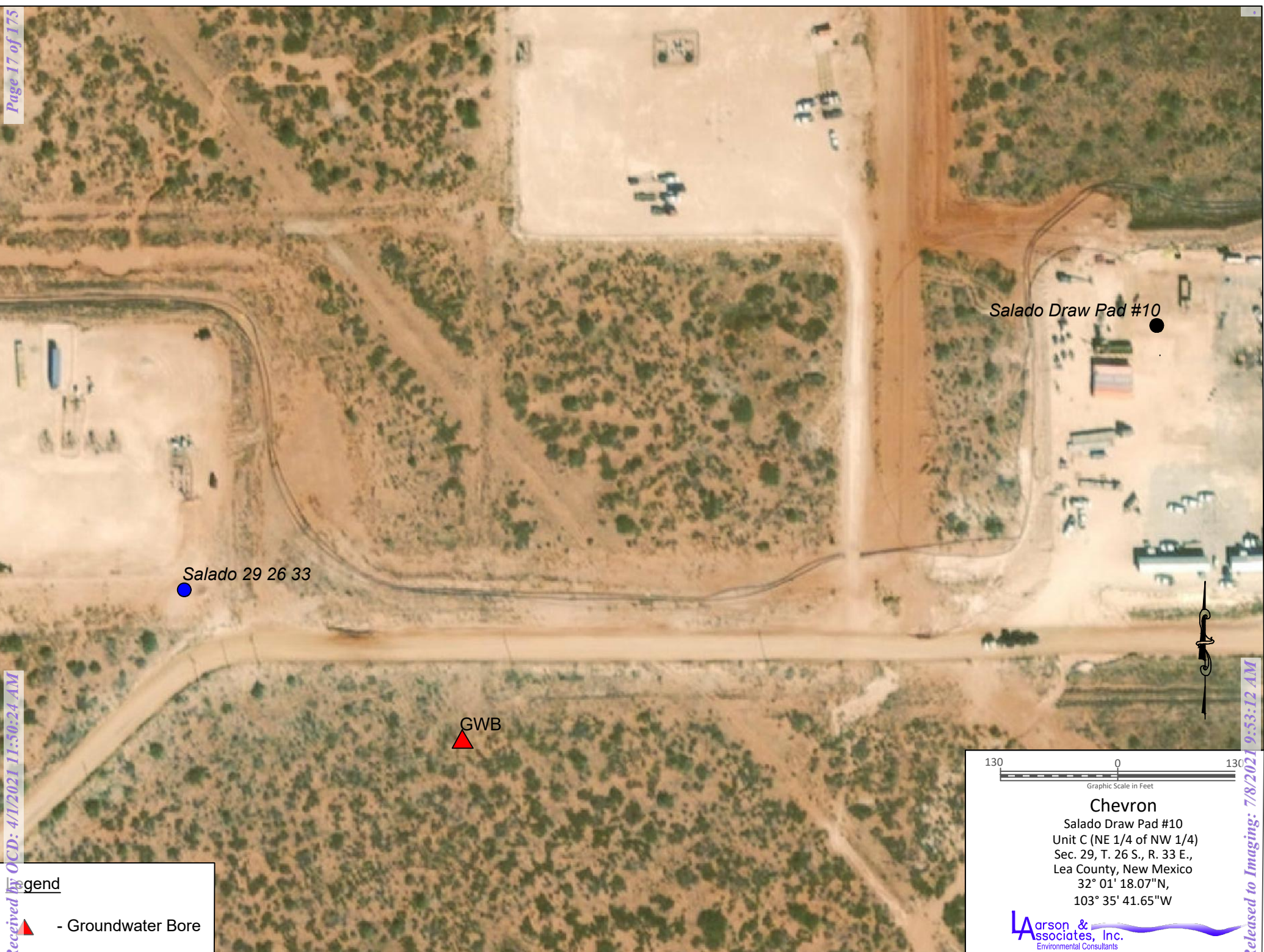
- Estimated Spill Area
- Soil Sample Location
- Proposed Excavation: 1.5' bgs
- Proposed Excavation: 3' bgs
- Proposed Excavation: 4.1' bgs



Chevron
Salado Draw Pad #10
Unit C (NE 1/4 of NW 1/4)
Sec. 29, T. 26 S., R. 33 E.,
Lea County, New Mexico
32° 01' 18.07"N,
103° 35' 41.65"W

Larson & Associates, Inc.
Environmental Consultants

Figure 3 - Aerial Map Showing Proposed Excavation Locations



Legend

 - Groundwater Bore

Graphic Scale in Feet

130 0 130

Chevron
Salado Draw Pad #10
Unit C (NE 1/4 of NW 1/4)
Sec. 29, T. 26 S., R. 33 E.,
Lea County, New Mexico
32° 01' 18.07"N,
103° 35' 41.65"W

Larson & Associates, Inc.
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Figure 4 - Aerial Map Showing Salado 29 26 33

Appendix A
Chevron Spill Calculation

Incident ID	
District RP	
Facility ID	
Application ID	



Appendix B

Boring Log

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 12:15 Finish: 2:30 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING										SAMPLE			REMARKS	
					PPM X _____										NUMBER	PID READING	RECOVERY	DEPTH	BACKGROUND PID READING
					2	4	6	8	10	12	14	16	18						
	0	Sand, 2.5YR 5/8, Red, Well Sorted, Subrounded, Medium Fine Grained Quartz Sand	SW															1	
	5																	5	
	10	Caliche, 7.5YR 8/3, Pink																10	
	15																	15	
	20	Sand, 5YR 7/6, Reddish Yellow, Moderately Sorted, Subrounded, Fine Grained Quartz Sand with 10-20mm Clasts	SW															20	
	25																	25	
	30	5YR 5/8, Yellowish Red, Moderately Sorted, Subrounded, Moderate Grained Quartz Sand with 5-10mm Clasts	SW															30	
	35																	35	
	40	5YR 6/6, Reddish Yellow, Poorly Sorted, Subrounded, Fine Grained Quartz Sand with 3-10mm Clasts	SW															40	
	45																	45	
	50	2.5YR 4/8, Red, Well Sorted Rounded, Fine Grained Quartz Sand	SW															50	
	55																	55	
	60																	60	
	65																	65	



ONE CONTINUOUS AUGER SAMPLER



WATER TABLE (TIME OF BORING)



STANDARD PENETRATION TEST



LABORATORY TEST LOCATION



UNDISTURBED SAMPLE



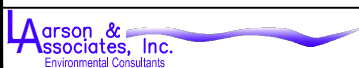
PENETROMETER (TONS/ SQ. FT)



WATER TABLE (24 HRS)



NR NO RECOVERY

JOB NUMBER : Chevron/ 20-0107-08HOLE DIAMETER : 5"LOCATION : Salado Draw 29 26 33LAI GEOLOGIST : D. St. GermainDRILLING CONTRACTOR : SDIDRILLING METHOD : Air Rotary

DRILL DATE :

11/30/2020

BORING NUMBER :

GWB-1

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 12:15 Finish: 2:30 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING										SAMPLE		REMARKS		
					PPM X _____										NUMBER	PID READING	RECOVERY	DEPTH	BACKGROUND PID READING
					2	4	6	8	10	12	14	16	18						
	70																		
	75		SW																
	80																		
	85																		
	90	Sand, 5YR 4/6, Yellowish Red, Moderately Sorted, Subrounded, Medium Grained Quartz Sand with 1-3mm Clasts																	
	95																		
	100	7.5YR 5/8, Strong Brown, Moderately Sorted, Subrounded, Fine to Medium Grained Quartz Sand	SW																
	105	5YR 4/6, Yellowish Red, Moderately Sorted, Subrounded, Medium Grained Quartz Sand with 1-5mm Clasts																	
	110																		
	115	TD: 115'																	
	120																		

 Groundwater at 86.30'

☐ ONE CONTINUOUS AUGER SAMPLER
☐ STANDARD PENETRATION TEST
☐ UNDISTURBED SAMPLE
☐ WATER TABLE (24 HRS)

 WATER TABLE (TIME OF BORING)
 LABORATORY TEST LOCATION
 PENETROMETER (TONS/ SQ. FT)
 NO RECOVERY



DRILL DATE : 11/30/2020
 BORING NUMBER : GWB-1

JOB NUMBER : Chevron/ 20-0107-08
 HOLE DIAMETER : 5"
 LOCATION : Salado Draw 29 26 33
 LAI GEOLOGIST : D. St. Germain
 DRILLING CONTRACTOR : SDI
 DRILLING METHOD : Air Rotary

Appendix C

Karst Risk Potential



Browser

★ Favorites

▶ Spatial Bookmarks

▶ Project Home

▶ Home

▶ C:\

▶ D:\

▶ L:\

▶ Z:\

▶ GeoPackage

▶ Spatialite

▶ PostGIS

▶ MSSQL

▶ Oracle

▶ DB2

▶ WMS/WMTS

▶ XYZ Tiles

▶ WCS

▶ WFS / OGC API - Features

▶ OWS

▶ ArcGisMapServer

▶ ArcGisFeatureServer

▶ GeoNode

Layers

☒ Added geom info

☒ carlsbad_west

☒ Karst_or_No_Karst

- ☒ High
- ☒ Low
- ☒ Medium

☒ Bing Satellite



Appendix D
Laboratory Reports

Certificate of Analysis Summary 667586

Larson and Associates, Inc., Midland, TX

Project Name: Salado Draw Pad 10 Well 20

Project Id: 19-0180-02

Date Received in Lab: Fri 07.17.2020 16:17

Contact: Mark Larson

Report Date: 07.27.2020 16:18

Project Location: NM

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	667586-001	667586-002	667586-003	667586-004	667586-005	667586-006
	<i>Field Id:</i>	S-1	S-2	S-3	S-4	S-5	S-6
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.17.2020 11:30	07.17.2020 11:40	07.17.2020 11:50	07.17.2020 12:00	07.17.2020 11:25	07.17.2020 11:30
BTEX by EPA 8021B	<i>Extracted:</i>	07.26.2020 10:00	07.26.2020 10:00	07.26.2020 10:00	07.26.2020 10:00	07.26.2020 10:00	07.26.2020 10:00
	<i>Analyzed:</i>	07.26.2020 17:07	07.26.2020 17:28	07.26.2020 17:48	07.26.2020 19:11	07.26.2020 19:32	07.26.2020 19:52
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		0.00211 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.0202 0.0202	<0.00202 0.00202	<0.00200 0.00200
Toluene		0.00378 0.00200	<0.00201 0.00201	<0.00202 0.00202	0.0338 0.0202	<0.00202 0.00202	<0.00200 0.00200
Ethylbenzene		0.00327 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.0202 0.0202	<0.00202 0.00202	<0.00200 0.00200
m,p-Xylenes		0.00638 0.00401	<0.00402 0.00402	<0.00403 0.00403	<0.0403 0.0403	<0.00403 0.00403	<0.00399 0.00399
o-Xylene		0.00318 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.0202 0.0202	<0.00202 0.00202	<0.00200 0.00200
Total Xylenes		0.00956 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.0202 0.0202	<0.00202 0.00202	<0.00200 0.00200
Total BTEX		0.0187 0.00200	<0.00201 0.00201	<0.00202 0.00202	0.0338 0.0202	<0.00202 0.00202	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	07.21.2020 15:45	07.21.2020 15:45	07.21.2020 15:45	07.21.2020 15:45	07.21.2020 15:45	07.21.2020 15:45
	<i>Analyzed:</i>	07.21.2020 22:01	07.21.2020 22:20	07.21.2020 22:26	07.21.2020 22:32	07.21.2020 22:38	07.21.2020 22:44
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1770 24.9	1400 24.8	282 5.02	2240 25.0	32.7 5.04	11.1 4.96
TPH By SW8015 Mod	<i>Extracted:</i>	07.20.2020 13:00	07.20.2020 13:00	07.20.2020 13:00	07.20.2020 13:00	07.20.2020 13:00	07.20.2020 13:00
	<i>Analyzed:</i>	07.20.2020 18:15	07.20.2020 19:12	07.20.2020 19:31	07.20.2020 19:50	07.20.2020 20:09	07.20.2020 20:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		89.5 X 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9
Diesel Range Organics		4880 50.0	<49.9 49.9	<49.9 49.9	4070 49.8	<50.0 50.0	<49.9 49.9
Oil Range Hydrocarbons		<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9
Total TPH		4970 50.0	<49.9 49.9	<49.9 49.9	4070 49.8	<50.0 50.0	<49.9 49.9

BRL - Below Reporting Limit



Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 667586

Larson and Associates, Inc., Midland, TX

Project Name: Salado Draw Pad 10 Well 20

Project Id: 19-0180-02

Contact: Mark Larson

Project Location: NM

Date Received in Lab: Fri 07.17.2020 16:17

Report Date: 07.27.2020 16:18

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	667586-007	667586-008	667586-009			
	Field Id:	S-7	S-8	S-9			
	Depth:						
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	07.17.2020 11:35	07.17.2020 11:40	07.17.2020 11:45			
BTEX by EPA 8021B	Extracted:	07.26.2020 10:00	07.26.2020 11:30	07.26.2020 11:30			
	Analyzed:	07.26.2020 20:13	07.27.2020 01:43	07.27.2020 02:04			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201			
Toluene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201			
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201			
m,p-Xylenes		<0.00404 0.00404	<0.00400 0.00400	<0.00402 0.00402			
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201			
Total Xylenes		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201			
Total BTEX		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201			
Chloride by EPA 300	Extracted:	07.21.2020 15:45	07.21.2020 15:45	07.22.2020 16:15			
	Analyzed:	07.21.2020 22:51	07.21.2020 22:57	07.23.2020 11:22			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		1650 25.0	1330 25.0	4520 X 24.8			
TPH By SW8015 Mod	Extracted:	07.20.2020 13:00	07.20.2020 13:00	07.20.2020 13:00			
	Analyzed:	07.20.2020 20:46	07.20.2020 21:05	07.20.2020 21:24			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons		<50.0 50.0	<50.0 50.0	<49.9 49.9			
Diesel Range Organics		<50.0 50.0	<50.0 50.0	<49.9 49.9			
Oil Range Hydrocarbons		<50.0 50.0	<50.0 50.0	<49.9 49.9			
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9			

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 667586

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Salado Draw Pad 10 Well 20

19-0180-02

07.27.2020

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.27.2020

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **667586**
Salado Draw Pad 10 Well 20
Project Address: NM

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 667586. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 667586 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Holly Taylor".

Holly Taylor
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 667586****Larson and Associates, Inc., Midland, TX**

Salado Draw Pad 10 Well 20

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-1	S	07.17.2020 11:30		667586-001
S-2	S	07.17.2020 11:40		667586-002
S-3	S	07.17.2020 11:50		667586-003
S-4	S	07.17.2020 12:00		667586-004
S-5	S	07.17.2020 11:25		667586-005
S-6	S	07.17.2020 11:30		667586-006
S-7	S	07.17.2020 11:35		667586-007
S-8	S	07.17.2020 11:40		667586-008
S-9	S	07.17.2020 11:45		667586-009

**CASE NARRATIVE****Client Name: Larson and Associates, Inc.****Project Name: Salado Draw Pad 10 Well 20**Project ID: 19-0180-02
Work Order Number(s): 667586Report Date: 07.27.2020
Date Received: 07.17.2020**Sample receipt non conformances and comments:****Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3132192 TPH By SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7707723-1-BKS.

Surrogate o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7707723-1-BLK.

Lab Sample ID 667586-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Gasoline Range Hydrocarbons recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 667586-001, -002, -003, -004, -005, -006, -007, -008, -009.

The Laboratory Control Sample for Gasoline Range Hydrocarbons is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3132421 Chloride by EPA 300

Lab Sample ID 667832-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 667586-009.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3132650 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 667586-001,667586-004,667586-002.



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-1
Lab Sample Id: 667586-001

Matrix: Soil
Date Collected: 07.17.2020 11:30

Date Received: 07.17.2020 16:17

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.21.2020 15:45

Basis: Wet Weight

Seq Number: 3132267

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1770	24.9	mg/kg	07.21.2020 22:01		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.20.2020 13:00

Basis: Wet Weight

Seq Number: 3132192

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	89.5	50.0	mg/kg	07.20.2020 18:15	X	1
Diesel Range Organics	C10C28DRO	4880	50.0	mg/kg	07.20.2020 18:15		1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	07.20.2020 18:15	U	1
Total TPH	PHC635	4970	50.0	mg/kg	07.20.2020 18:15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	07.20.2020 18:15	
o-Terphenyl	84-15-1	124	%	70-130	07.20.2020 18:15	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-1
Lab Sample Id: 667586-001

Matrix: Soil
Date Collected: 07.17.2020 11:30

Date Received: 07.17.2020 16:17

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 07.26.2020 10:00

Basis: Wet Weight

Seq Number: 3132650

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00211	0.00200	mg/kg	07.26.2020 17:07		1
Toluene	108-88-3	0.00378	0.00200	mg/kg	07.26.2020 17:07		1
Ethylbenzene	100-41-4	0.00327	0.00200	mg/kg	07.26.2020 17:07		1
m,p-Xylenes	179601-23-1	0.00638	0.00401	mg/kg	07.26.2020 17:07		1
o-Xylene	95-47-6	0.00318	0.00200	mg/kg	07.26.2020 17:07		1
Total Xylenes	1330-20-7	0.00956	0.00200	mg/kg	07.26.2020 17:07		1
Total BTEX		0.0187	0.00200	mg/kg	07.26.2020 17:07		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	123	%	70-130	07.26.2020 17:07		
4-Bromofluorobenzene	460-00-4	210	%	70-130	07.26.2020 17:07	**	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-2
Lab Sample Id: 667586-002

Matrix: Soil
Date Collected: 07.17.2020 11:40

Date Received: 07.17.2020 16:17

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.21.2020 15:45

Basis: Wet Weight

Seq Number: 3132267

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1400	24.8	mg/kg	07.21.2020 22:20		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.20.2020 13:00

Basis: Wet Weight

Seq Number: 3132192

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	07.20.2020 19:12	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	07.20.2020 19:12	U	1
Oil Range Hydrocarbons	PHCG2835	<49.9	49.9	mg/kg	07.20.2020 19:12	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.20.2020 19:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-130	07.20.2020 19:12	
o-Terphenyl	84-15-1	102	%	70-130	07.20.2020 19:12	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-2
Lab Sample Id: 667586-002

Matrix: Soil
Date Collected: 07.17.2020 11:40

Date Received: 07.17.2020 16:17

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 07.26.2020 10:00

Basis: Wet Weight

Seq Number: 3132650

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.26.2020 17:28	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.26.2020 17:28	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.26.2020 17:28	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.26.2020 17:28	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.26.2020 17:28	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.26.2020 17:28	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.26.2020 17:28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	116	%	70-130	07.26.2020 17:28		
4-Bromofluorobenzene	460-00-4	138	%	70-130	07.26.2020 17:28	**	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-3
Lab Sample Id: 667586-003

Matrix: Soil
Date Collected: 07.17.2020 11:50

Date Received: 07.17.2020 16:17

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.21.2020 15:45

Basis: Wet Weight

Seq Number: 3132267

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	282	5.02	mg/kg	07.21.2020 22:26		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.20.2020 13:00

Basis: Wet Weight

Seq Number: 3132192

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	07.20.2020 19:31	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	07.20.2020 19:31	U	1
Oil Range Hydrocarbons	PHCG2835	<49.9	49.9	mg/kg	07.20.2020 19:31	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.20.2020 19:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-130	07.20.2020 19:31	
o-Terphenyl	84-15-1	98	%	70-130	07.20.2020 19:31	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-3
Lab Sample Id: 667586-003

Matrix: Soil
Date Collected: 07.17.2020 11:50

Date Received: 07.17.2020 16:17

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 07.26.2020 10:00

Basis: Wet Weight

Seq Number: 3132650

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.26.2020 17:48	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.26.2020 17:48	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.26.2020 17:48	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.26.2020 17:48	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.26.2020 17:48	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.26.2020 17:48	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.26.2020 17:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	07.26.2020 17:48		
1,4-Difluorobenzene	540-36-3	115	%	70-130	07.26.2020 17:48		



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-4
Lab Sample Id: 667586-004

Matrix: Soil
Date Collected: 07.17.2020 12:00

Date Received: 07.17.2020 16:17

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.21.2020 15:45

Basis: Wet Weight

Seq Number: 3132267

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2240	25.0	mg/kg	07.21.2020 22:32		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.20.2020 13:00

Basis: Wet Weight

Seq Number: 3132192

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	07.20.2020 19:50	U	1
Diesel Range Organics	C10C28DRO	4070	49.8	mg/kg	07.20.2020 19:50		1
Oil Range Hydrocarbons	PHCG2835	<49.8	49.8	mg/kg	07.20.2020 19:50	U	1
Total TPH	PHC635	4070	49.8	mg/kg	07.20.2020 19:50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-130	07.20.2020 19:50	
o-Terphenyl	84-15-1	100	%	70-130	07.20.2020 19:50	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-4
Lab Sample Id: 667586-004

Matrix: Soil
Date Collected: 07.17.2020 12:00

Date Received: 07.17.2020 16:17

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 07.26.2020 10:00

Basis: Wet Weight

Seq Number: 3132650

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0202	0.0202	mg/kg	07.26.2020 19:11	U	10
Toluene	108-88-3	0.0338	0.0202	mg/kg	07.26.2020 19:11		10
Ethylbenzene	100-41-4	<0.0202	0.0202	mg/kg	07.26.2020 19:11	U	10
m,p-Xylenes	179601-23-1	<0.0403	0.0403	mg/kg	07.26.2020 19:11	U	10
o-Xylene	95-47-6	<0.0202	0.0202	mg/kg	07.26.2020 19:11	U	10
Total Xylenes	1330-20-7	<0.0202	0.0202	mg/kg	07.26.2020 19:11	U	10
Total BTEX		0.0338	0.0202	mg/kg	07.26.2020 19:11		10
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	122	%	70-130	07.26.2020 19:11		
4-Bromofluorobenzene	460-00-4	138	%	70-130	07.26.2020 19:11	**	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-5
Lab Sample Id: 667586-005

Matrix: Soil
Date Collected: 07.17.2020 11:25

Date Received: 07.17.2020 16:17

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.21.2020 15:45

Basis: Wet Weight

Seq Number: 3132267

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.7	5.04	mg/kg	07.21.2020 22:38		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.20.2020 13:00

Basis: Wet Weight

Seq Number: 3132192

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	07.20.2020 20:09	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	07.20.2020 20:09	U	1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	07.20.2020 20:09	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.20.2020 20:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-130	07.20.2020 20:09	
o-Terphenyl	84-15-1	94	%	70-130	07.20.2020 20:09	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-5
Lab Sample Id: 667586-005

Matrix: Soil
Date Collected: 07.17.2020 11:25

Date Received: 07.17.2020 16:17

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 07.26.2020 10:00

Basis: Wet Weight

Seq Number: 3132650

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.26.2020 19:32	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.26.2020 19:32	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.26.2020 19:32	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.26.2020 19:32	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.26.2020 19:32	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.26.2020 19:32	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.26.2020 19:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	07.26.2020 19:32	
4-Bromofluorobenzene	460-00-4	122	%	70-130	07.26.2020 19:32	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-6
Lab Sample Id: 667586-006

Matrix: Soil
Date Collected: 07.17.2020 11:30

Date Received: 07.17.2020 16:17

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.21.2020 15:45

Basis: Wet Weight

Seq Number: 3132267

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.1	4.96	mg/kg	07.21.2020 22:44		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.20.2020 13:00

Basis: Wet Weight

Seq Number: 3132192

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	07.20.2020 20:27	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	07.20.2020 20:27	U	1
Oil Range Hydrocarbons	PHCG2835	<49.9	49.9	mg/kg	07.20.2020 20:27	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.20.2020 20:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	07.20.2020 20:27	
o-Terphenyl	84-15-1	100	%	70-130	07.20.2020 20:27	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-6
Lab Sample Id: 667586-006

Matrix: Soil
Date Collected: 07.17.2020 11:30

Date Received: 07.17.2020 16:17

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 07.26.2020 10:00

Basis: Wet Weight

Seq Number: 3132650

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.26.2020 19:52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.26.2020 19:52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.26.2020 19:52	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.26.2020 19:52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.26.2020 19:52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.26.2020 19:52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.26.2020 19:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.26.2020 19:52		
1,4-Difluorobenzene	540-36-3	112	%	70-130	07.26.2020 19:52		



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-7
Lab Sample Id: 667586-007

Matrix: Soil
Date Collected: 07.17.2020 11:35

Date Received: 07.17.2020 16:17

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.21.2020 15:45

Basis: Wet Weight

Seq Number: 3132267

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1650	25.0	mg/kg	07.21.2020 22:51		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.20.2020 13:00

Basis: Wet Weight

Seq Number: 3132192

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	07.20.2020 20:46	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	07.20.2020 20:46	U	1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	07.20.2020 20:46	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.20.2020 20:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-130	07.20.2020 20:46	
o-Terphenyl	84-15-1	104	%	70-130	07.20.2020 20:46	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-7
Lab Sample Id: 667586-007

Matrix: Soil
Date Collected: 07.17.2020 11:35

Date Received: 07.17.2020 16:17

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 07.26.2020 10:00

Basis: Wet Weight

Seq Number: 3132650

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.26.2020 20:13	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.26.2020 20:13	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.26.2020 20:13	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.26.2020 20:13	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.26.2020 20:13	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.26.2020 20:13	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.26.2020 20:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	07.26.2020 20:13		
1,4-Difluorobenzene	540-36-3	110	%	70-130	07.26.2020 20:13		



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: **S-8**
Lab Sample Id: 667586-008

Matrix: Soil
Date Collected: 07.17.2020 11:40

Date Received: 07.17.2020 16:17

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.21.2020 15:45

Basis: Wet Weight

Seq Number: 3132267

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1330	25.0	mg/kg	07.21.2020 22:57		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.20.2020 13:00

Basis: Wet Weight

Seq Number: 3132192

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	07.20.2020 21:05	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	07.20.2020 21:05	U	1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	07.20.2020 21:05	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.20.2020 21:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-130	07.20.2020 21:05	
o-Terphenyl	84-15-1	99	%	70-130	07.20.2020 21:05	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: **S-8**
Lab Sample Id: 667586-008

Matrix: Soil
Date Collected: 07.17.2020 11:40

Date Received: 07.17.2020 16:17

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 07.26.2020 11:30

Basis: Wet Weight

Seq Number: 3132653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.27.2020 01:43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.2020 01:43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.2020 01:43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.27.2020 01:43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.2020 01:43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.2020 01:43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.2020 01:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.2020 01:43	
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.27.2020 01:43	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-9
Lab Sample Id: 667586-009

Matrix: Soil
Date Collected: 07.17.2020 11:45

Date Received: 07.17.2020 16:17

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.22.2020 16:15

Basis: Wet Weight

Seq Number: 3132421

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4520	24.8	mg/kg	07.23.2020 11:22	X	5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.20.2020 13:00

Basis: Wet Weight

Seq Number: 3132192

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	07.20.2020 21:24	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	07.20.2020 21:24	U	1
Oil Range Hydrocarbons	PHCG2835	<49.9	49.9	mg/kg	07.20.2020 21:24	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.20.2020 21:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	07.20.2020 21:24	
o-Terphenyl	84-15-1	101	%	70-130	07.20.2020 21:24	



Certificate of Analytical Results 667586

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10 Well 20

Sample Id: S-9
Lab Sample Id: 667586-009

Matrix: Soil
Date Collected: 07.17.2020 11:45

Date Received: 07.17.2020 16:17

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 07.26.2020 11:30

Basis: Wet Weight

Seq Number: 3132653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.27.2020 02:04	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.27.2020 02:04	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.27.2020 02:04	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.27.2020 02:04	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.27.2020 02:04	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.27.2020 02:04	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.27.2020 02:04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	07.27.2020 02:04		
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.27.2020 02:04		

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Larson and Associates, Inc.
Salado Draw Pad 10 Well 20

Analytical Method: Chloride by EPA 300

Seq Number: 3132267

MB Sample Id: 7707771-1-BLK

Matrix: Solid

LCS Sample Id: 7707771-1-BKS

Prep Method: E300P

Date Prep: 07.21.2020

LCSD Sample Id: 7707771-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	270	108	269	108	90-110	0	20	mg/kg	07.21.2020 19:58	

Analytical Method: Chloride by EPA 300

Seq Number: 3132421

MB Sample Id: 7707858-1-BLK

Matrix: Solid

LCS Sample Id: 7707858-1-BKS

Prep Method: E300P

Date Prep: 07.22.2020

LCSD Sample Id: 7707858-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	266	106	273	109	90-110	3	20	mg/kg	07.22.2020 21:16	

Analytical Method: Chloride by EPA 300

Seq Number: 3132267

Parent Sample Id: 667552-007

Matrix: Soil

MS Sample Id: 667552-007 S

Prep Method: E300P

Date Prep: 07.21.2020

MSD Sample Id: 667552-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4370	2510	7180	112	7080	108	90-110	1	20	mg/kg	07.21.2020 20:17	X

Analytical Method: Chloride by EPA 300

Seq Number: 3132267

Parent Sample Id: 667552-017

Matrix: Soil

MS Sample Id: 667552-017 S

Prep Method: E300P

Date Prep: 07.21.2020

MSD Sample Id: 667552-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3250	1250	4610	109	4570	106	90-110	1	20	mg/kg	07.21.2020 21:43	

Analytical Method: Chloride by EPA 300

Seq Number: 3132421

Parent Sample Id: 667586-009

Matrix: Soil

MS Sample Id: 667586-009 S

Prep Method: E300P

Date Prep: 07.22.2020

MSD Sample Id: 667586-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4520	1240	5830	106	5940	115	90-110	2	20	mg/kg	07.23.2020 11:28	X

Analytical Method: Chloride by EPA 300

Seq Number: 3132421

Parent Sample Id: 667832-001

Matrix: Soil

MS Sample Id: 667832-001 S

Prep Method: E300P

Date Prep: 07.22.2020

MSD Sample Id: 667832-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	29.2	249	299	108	300	109	90-110	0	20	mg/kg	07.22.2020 21:38	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Larson and Associates, Inc.
Salado Draw Pad 10 Well 20

Analytical Method: TPH By SW8015 Mod

Seq Number: 3132192

MB Sample Id: 7707723-1-BLK

Matrix: Solid

LCS Sample Id: 7707723-1-BKS

Prep Method: SW8015P

Date Prep: 07.20.2020

LCSD Sample Id: 7707723-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	1020	102	941	94	70-130	8	20	mg/kg	07.20.2020 17:36	
Diesel Range Organics	<50.0	1000	1140	114	1050	105	70-130	8	20	mg/kg	07.20.2020 17:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		141	**	128		70-130	%	07.20.2020 17:36
o-Terphenyl	131	**	127		123		70-130	%	07.20.2020 17:36

Analytical Method: TPH By SW8015 Mod

Seq Number: 3132192

Matrix: Solid

MB Sample Id: 7707723-1-BLK

Prep Method: SW8015P

Date Prep: 07.20.2020

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons	<50.0	mg/kg	07.20.2020 17:17	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3132192

Matrix: Soil

Parent Sample Id: 667586-001

MS Sample Id: 667586-001 S

Prep Method: SW8015P

Date Prep: 07.20.2020

MSD Sample Id: 667586-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	89.5	996	777	69	857	77	70-130	10	20	mg/kg	07.20.2020 18:34	X
Diesel Range Organics	4880	996	5680	80	5710	83	70-130	1	20	mg/kg	07.20.2020 18:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		123		70-130	%	07.20.2020 18:34
o-Terphenyl	128		99		70-130	%	07.20.2020 18:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132650

Matrix: Solid

MB Sample Id: 7708102-1-BLK

LCS Sample Id: 7708102-1-BKS

Prep Method: SW5035A

Date Prep: 07.26.2020

LCSD Sample Id: 7708102-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.111	111	0.113	113	70-130	2	35	mg/kg	07.26.2020 12:21	
Toluene	<0.00200	0.100	0.101	101	0.101	101	70-130	0	35	mg/kg	07.26.2020 12:21	
Ethylbenzene	<0.00200	0.100	0.0966	97	0.0958	96	70-130	1	35	mg/kg	07.26.2020 12:21	
m,p-Xylenes	<0.00400	0.200	0.182	91	0.184	92	70-130	1	35	mg/kg	07.26.2020 12:21	
o-Xylene	<0.00200	0.100	0.0925	93	0.0916	92	70-130	1	35	mg/kg	07.26.2020 12:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		101		100		70-130	%	07.26.2020 12:21
4-Bromofluorobenzene	104		100		97		70-130	%	07.26.2020 12:21

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Larson and Associates, Inc.
Salado Draw Pad 10 Well 20

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132653

Matrix: Solid

Prep Method: SW5035A

Date Prep: 07.26.2020

MB Sample Id: 7708104-1-BLK

LCS Sample Id: 7708104-1-BKS

LCSD Sample Id: 7708104-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.119	119	0.119	119	70-130	0	35	mg/kg	07.26.2020 23:18	
Toluene	<0.00200	0.100	0.101	101	0.107	107	70-130	6	35	mg/kg	07.26.2020 23:18	
Ethylbenzene	<0.00200	0.100	0.0966	97	0.104	104	70-130	7	35	mg/kg	07.26.2020 23:18	
m,p-Xylenes	<0.00400	0.200	0.184	92	0.201	101	70-130	9	35	mg/kg	07.26.2020 23:18	
o-Xylene	<0.00200	0.100	0.0903	90	0.0996	100	70-130	10	35	mg/kg	07.26.2020 23:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		103		101		70-130	%	07.26.2020 23:18
4-Bromofluorobenzene	121		97		104		70-130	%	07.26.2020 23:18

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132650

Matrix: Soil

Prep Method: SW5035A

Date Prep: 07.26.2020

Parent Sample Id: 667520-054

MS Sample Id: 667520-054 S

MSD Sample Id: 667520-054 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0967	97	0.0927	93	70-130	4	35	mg/kg	07.26.2020 13:20	
Toluene	<0.00199	0.0996	0.0884	89	0.0844	85	70-130	5	35	mg/kg	07.26.2020 13:20	
Ethylbenzene	<0.00199	0.0996	0.0838	84	0.0796	80	70-130	5	35	mg/kg	07.26.2020 13:20	
m,p-Xylenes	<0.00398	0.199	0.159	80	0.152	76	70-130	5	35	mg/kg	07.26.2020 13:20	
o-Xylene	<0.00199	0.0996	0.0786	79	0.0746	75	70-130	5	35	mg/kg	07.26.2020 13:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	07.26.2020 13:20
4-Bromofluorobenzene	102		98		70-130	%	07.26.2020 13:20

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132653

Matrix: Soil

Prep Method: SW5035A

Date Prep: 07.26.2020

Parent Sample Id: 667839-002

MS Sample Id: 667839-002 S

MSD Sample Id: 667839-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.103	103	0.108	108	70-130	5	35	mg/kg	07.26.2020 23:59	
Toluene	<0.00199	0.0996	0.0944	95	0.102	102	70-130	8	35	mg/kg	07.26.2020 23:59	
Ethylbenzene	<0.00199	0.0996	0.0901	90	0.0982	98	70-130	9	35	mg/kg	07.26.2020 23:59	
m,p-Xylenes	<0.00398	0.199	0.173	87	0.190	95	70-130	9	35	mg/kg	07.26.2020 23:59	
o-Xylene	<0.00199	0.0996	0.0862	87	0.0945	95	70-130	9	35	mg/kg	07.26.2020 23:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		70-130	%	07.26.2020 23:59
4-Bromofluorobenzene	102		104		70-130	%	07.26.2020 23:59

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

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

DATE: 7/17/20 PAGE 1 OF 1
PO#: _____ LAB WORK ORDER#: _____
PROJECT LOCATION OR NAME: Solids draw And 12 well 20
LAI PROJECT #: 14-0180-02 COLLECTOR: TJ+DS

CHAIN-OF-CUSTODY

447506

203
101
N

Final 1.000

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.**Date/ Time Received:** 07.17.2020 04.17.00 PM**Work Order #:** 667586**Acceptable Temperature Range:** 0 - 6 degC**Air and Metal samples Acceptable Range:** Ambient**Temperature Measuring device used :** IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer

Date: 07.17.2020

Checklist reviewed by: Holly Taylor
Holly Taylor

Date: 07.22.2020

Certificate of Analysis Summary 669566

Larson and Associates, Inc., Midland, TX

Project Name: Pad 10 2DH

Project Id: 19-0180-02

Date Received in Lab: Mon 08.10.2020 09:00

Contact: Mark Larson

Report Date: 08.17.2020 09:18

Project Location:

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	669566-001	669566-002	669566-003	669566-004	669566-005	669566-006
	<i>Field Id:</i>	S-1 1'	S-1 3'	S-1 5'	S-1 7'	S-2 1'	S-2 3'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.05.2020 10:22	08.05.2020 10:23	08.05.2020 10:32	08.05.2020 10:33	08.05.2020 11:30	08.05.2020 11:31
BTEX by EPA 8021B	<i>Extracted:</i>	08.12.2020 09:00	08.12.2020 14:00	08.12.2020 14:00		08.12.2020 14:00	08.12.2020 14:00
	<i>Analyzed:</i>	08.12.2020 14:31	08.13.2020 04:44	08.13.2020 05:04		08.13.2020 05:25	08.13.2020 05:45
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL		mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198		<0.00198 0.00198	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198		<0.00198 0.00198	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198		<0.00198 0.00198	<0.00199 0.00199
m,p-Xylenes		<0.00399 0.00399	<0.00398 0.00398	<0.00396 0.00396		<0.00397 0.00397	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198		<0.00198 0.00198	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198		<0.00198 0.00198	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198		<0.00198 0.00198	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	08.11.2020 14:10	08.11.2020 14:10	08.11.2020 14:10	08.11.2020 14:10	08.11.2020 14:10	08.11.2020 14:10
	<i>Analyzed:</i>	08.11.2020 16:36	08.11.2020 16:41	08.11.2020 16:46	08.11.2020 17:02	08.11.2020 17:07	08.11.2020 17:23
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		951 4.95	1480 25.2	259 5.00	332 4.96	1090 24.8	293 5.02
TPH by SW8015 Mod	<i>Extracted:</i>	08.11.2020 17:00	08.11.2020 17:00	08.11.2020 17:00		08.11.2020 17:00	08.11.2020 17:00
	<i>Analyzed:</i>	08.11.2020 21:36	08.11.2020 22:33	08.11.2020 22:52		08.11.2020 23:11	08.11.2020 23:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL		mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		95.0 49.9	<50.0 50.0	<49.8 49.8		<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		4540 X 49.9	<50.0 50.0	<49.8 49.8		<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<49.8 49.8		<50.0 50.0	<49.9 49.9
Total TPH		4640 49.9	<50.0 50.0	<49.8 49.8		<50.0 50.0	<49.9 49.9

BRL - Below Reporting Limit

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Certificate of Analysis Summary 669566

Larson and Associates, Inc., Midland, TX

Project Name: Pad 10 2DH

Project Id: 19-0180-02

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 08.10.2020 09:00

Report Date: 08.17.2020 09:18

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	669566-007	669566-008	669566-009	669566-010	669566-011	669566-012
	<i>Field Id:</i>	S-2 5'	S-4 1'	S-4 3'	S-4 5'	S-4 7'	S-7 1'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.05.2020 11:32	08.05.2020 09:44	08.05.2020 09:45	08.05.2020 09:54	08.05.2020 09:55	08.05.2020 09:28
BTEX by EPA 8021B	<i>Extracted:</i>	08.12.2020 14:00	08.13.2020 08:15	08.13.2020 08:15	08.13.2020 08:15		08.13.2020 08:15
	<i>Analyzed:</i>	08.13.2020 06:05	08.13.2020 12:31	08.13.2020 12:52	08.13.2020 13:12		08.13.2020 13:33
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		mg/kg RL
Benzene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199		<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199		<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199		<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00402 0.00402	<0.00398 0.00398		<0.00400 0.00400
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199		<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199		<0.00200 0.00200
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199		<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	08.11.2020 14:10	08.11.2020 14:10	08.11.2020 14:10	08.11.2020 14:10	08.11.2020 12:15	08.11.2020 12:15
	<i>Analyzed:</i>	08.11.2020 17:28	08.11.2020 17:34	08.11.2020 17:50	08.11.2020 17:55	08.11.2020 19:40	08.11.2020 19:59
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		218 4.96	987 4.98	145 5.00	246 25.0	580 5.04	74.2 25.0
TPH by SW8015 Mod	<i>Extracted:</i>	08.11.2020 17:00	08.11.2020 17:00	08.11.2020 17:00	08.11.2020 17:00		08.11.2020 17:00
	<i>Analyzed:</i>	08.11.2020 23:49	08.12.2020 00:08	08.12.2020 00:27	08.12.2020 00:45		08.12.2020 01:04
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9		<49.8 49.8
Diesel Range Organics (DRO)		<49.9 49.9	581 50.0	<50.0 50.0	<49.9 49.9		<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9		<49.8 49.8
Total TPH		<49.9 49.9	581 50.0	<50.0 50.0	<49.9 49.9		<49.8 49.8

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Certificate of Analysis Summary 669566

Larson and Associates, Inc., Midland, TX

Project Name: Pad 10 2DH

Project Id: 19-0180-02

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 08.10.2020 09:00

Report Date: 08.17.2020 09:18

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	669566-013	669566-014	669566-015	669566-016	669566-017	669566-018
	<i>Field Id:</i>	S-7 3'	S-7 5'	S-7 7'	S-8 1'	S-8 3'	S-8 5'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.05.2020 09:29	08.05.2020 09:34	08.05.2020 09:35	08.05.2020 09:13	08.05.2020 09:14	08.05.2020 09:16
BTEX by EPA 8021B	<i>Extracted:</i>	08.13.2020 08:15	08.13.2020 08:15		08.11.2020 11:30	08.11.2020 11:30	08.11.2020 11:30
	<i>Analyzed:</i>	08.13.2020 13:53	08.13.2020 14:14		08.11.2020 16:06	08.11.2020 16:29	08.11.2020 16:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL		mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00200 0.00200		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00200 0.00200		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00400 0.00400		<0.00398 0.00398	<0.00397 0.00397	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00200 0.00200		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00200 0.00200		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	08.11.2020 12:15	08.11.2020 12:15	08.11.2020 12:15	08.11.2020 12:15	08.11.2020 12:15	08.11.2020 12:15
	<i>Analyzed:</i>	08.11.2020 20:05	08.11.2020 20:11	08.11.2020 20:18	08.11.2020 20:37	08.11.2020 20:43	08.11.2020 20:49
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		38.5 24.8	69.2 5.05	212 4.95	783 50.2	637 24.9	125 24.8
TPH by SW8015 Mod	<i>Extracted:</i>	08.11.2020 17:00	08.11.2020 17:00		08.11.2020 17:00	08.11.2020 17:00	08.11.2020 17:00
	<i>Analyzed:</i>	08.12.2020 01:42	08.12.2020 02:01		08.12.2020 02:20	08.12.2020 02:38	08.12.2020 02:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL		mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9		<49.8 49.8	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9		268 49.8	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9		<49.8 49.8	<50.0 50.0	<50.0 50.0
Total TPH		<50.0 50.0	<49.9 49.9		268 49.8	<50.0 50.0	<50.0 50.0

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Certificate of Analysis Summary 669566

Larson and Associates, Inc., Midland, TX

Project Name: Pad 10 2DH

Project Id: 19-0180-02

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 08.10.2020 09:00

Report Date: 08.17.2020 09:18

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	669566-019	669566-020	669566-021	669566-022	669566-023	
	<i>Field Id:</i>	S-8 7'	S-9 1'	S-9 3'	S-9 5'	S-9 10'	
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	08.05.2020 09:17	08.05.2020 10:55	08.05.2020 10:56	08.05.2020 11:19	08.05.2020 11:20	
BTEX by EPA 8021B	<i>Extracted:</i>		08.11.2020 11:30	08.11.2020 11:30	08.11.2020 11:30		
	<i>Analyzed:</i>		08.11.2020 17:12	08.11.2020 17:35	08.11.2020 17:58		
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL	mg/kg RL		
Benzene			<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199		
Toluene			<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199		
Ethylbenzene			<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199		
m,p-Xylenes			<0.00397 0.00397	<0.00397 0.00397	<0.00398 0.00398		
o-Xylene			<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199		
Total Xylenes			<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199		
Total BTEX			<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199		
Chloride by EPA 300	<i>Extracted:</i>	08.11.2020 12:15	08.11.2020 12:15	08.11.2020 12:15	08.11.2020 12:15	08.11.2020 12:15	
	<i>Analyzed:</i>	08.11.2020 20:56	08.11.2020 21:02	08.11.2020 21:08	08.12.2020 08:38	08.11.2020 21:34	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		<5.00 5.00	454 5.03	183 4.97	2080 24.8	24.1 4.99	
TPH by SW8015 Mod	<i>Extracted:</i>		08.11.2020 17:00	08.11.2020 17:00	08.11.2020 17:00		
	<i>Analyzed:</i>		08.12.2020 03:16	08.12.2020 03:35	08.12.2020 03:53		
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)			<50.0 50.0	<49.9 49.9	<50.0 50.0		
Diesel Range Organics (DRO)			<50.0 50.0	<49.9 49.9	<50.0 50.0		
Motor Oil Range Hydrocarbons (MRO)			<50.0 50.0	<49.9 49.9	<50.0 50.0		
Total TPH			<50.0 50.0	<49.9 49.9	<50.0 50.0		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 669566

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Pad 10 2DH

19-0180-02

08.17.2020

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.17.2020

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **669566**
Pad 10 2DH
Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 669566. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 669566 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Holly Taylor".

Holly Taylor
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 669566****Larson and Associates, Inc., Midland, TX**

Pad 10 2DH

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-1 1'	S	08.05.2020 10:22		669566-001
S-1 3'	S	08.05.2020 10:23		669566-002
S-1 5'	S	08.05.2020 10:32		669566-003
S-1 7'	S	08.05.2020 10:33		669566-004
S-2 1'	S	08.05.2020 11:30		669566-005
S-2 3'	S	08.05.2020 11:31		669566-006
S-2 5'	S	08.05.2020 11:32		669566-007
S-4 1'	S	08.05.2020 09:44		669566-008
S-4 3'	S	08.05.2020 09:45		669566-009
S-4 5'	S	08.05.2020 09:54		669566-010
S-4 7'	S	08.05.2020 09:55		669566-011
S-7 1'	S	08.05.2020 09:28		669566-012
S-7 3'	S	08.05.2020 09:29		669566-013
S-7 5'	S	08.05.2020 09:34		669566-014
S-7 7'	S	08.05.2020 09:35		669566-015
S-8 1'	S	08.05.2020 09:13		669566-016
S-8 3'	S	08.05.2020 09:14		669566-017
S-8 5'	S	08.05.2020 09:16		669566-018
S-8 7'	S	08.05.2020 09:17		669566-019
S-9 1'	S	08.05.2020 10:55		669566-020
S-9 3'	S	08.05.2020 10:56		669566-021
S-9 5'	S	08.05.2020 11:19		669566-022
S-9 10'	S	08.05.2020 11:20		669566-023

**CASE NARRATIVE****Client Name: Larson and Associates, Inc.****Project Name: Pad 10 2DH**Project ID: 19-0180-02
Work Order Number(s): 669566Report Date: 08.17.2020
Date Received: 08.10.2020**Sample receipt non conformances and comments:****Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3134279 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 669566-016,669566-022,669566-021.

Batch: LBA-3134290 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 669566-001.

Lab Sample ID 669566-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Diesel Range Organics (DRO) recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 669566-001, -002, -003, -005, -006, -007, -008, -009, -010, -012, -013, -014, -016, -017, -018, -020, -021, -022.

The Laboratory Control Sample for Diesel Range Organics (DRO) is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3134537 BTEX by EPA 8021B

Lab Sample ID 669566-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Ethylbenzene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 669566-008, -009, -010, -012, -013, -014.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-1 1' Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-001 Date Collected: 08.05.2020 10:22
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 14:10 Basis: Wet Weight
 Seq Number: 3134218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	951	4.95	mg/kg	08.11.2020 16:36		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	95.0	49.9	mg/kg	08.11.2020 21:36		1
Diesel Range Organics (DRO)	C10C28DRO	4540	49.9	mg/kg	08.11.2020 21:36	X	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.11.2020 21:36	U	1
Total TPH	PHC635	4640	49.9	mg/kg	08.11.2020 21:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	08.11.2020 21:36	
o-Terphenyl	84-15-1	175	%	70-130	08.11.2020 21:36	**



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-1 1'
Lab Sample Id: 669566-001

Matrix: Soil
Date Collected: 08.05.2020 10:22

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 09:00

Basis: Wet Weight

Seq Number: 3134386

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.12.2020 14:31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.12.2020 14:31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.12.2020 14:31	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.12.2020 14:31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.12.2020 14:31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.12.2020 14:31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.12.2020 14:31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.12.2020 14:31		
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.12.2020 14:31		



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-1 3'** Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-002 Date Collected: 08.05.2020 10:23
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 14:10 Basis: Wet Weight
 Seq Number: 3134218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1480	25.2	mg/kg	08.11.2020 16:41		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.11.2020 22:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.11.2020 22:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.11.2020 22:33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.11.2020 22:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-130	08.11.2020 22:33	
o-Terphenyl	84-15-1	124	%	70-130	08.11.2020 22:33	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-1 3'
Lab Sample Id: 669566-002

Matrix: Soil
Date Collected: 08.05.2020 10:23

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.2020 04:44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.2020 04:44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.2020 04:44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.2020 04:44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.2020 04:44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.2020 04:44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.2020 04:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.13.2020 04:44	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.13.2020 04:44	



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Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-1 5' Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-003 Date Collected: 08.05.2020 10:32
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 14:10 Basis: Wet Weight
 Seq Number: 3134218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	259	5.00	mg/kg	08.11.2020 16:46		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.11.2020 22:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.11.2020 22:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.11.2020 22:52	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.11.2020 22:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-130	08.11.2020 22:52	
o-Terphenyl	84-15-1	126	%	70-130	08.11.2020 22:52	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-1 5'
Lab Sample Id: 669566-003

Matrix: Soil
Date Collected: 08.05.2020 10:32

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.13.2020 05:04	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.13.2020 05:04	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.13.2020 05:04	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.13.2020 05:04	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.13.2020 05:04	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.13.2020 05:04	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.13.2020 05:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.13.2020 05:04	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.13.2020 05:04	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-1 7'
Lab Sample Id: 669566-004

Matrix: Soil
Date Collected: 08.05.2020 10:33

Date Received: 08.10.2020 09:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.11.2020 14:10

Basis: Wet Weight

Seq Number: 3134218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	332	4.96	mg/kg	08.11.2020 17:02		1



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-2 1' Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-005 Date Collected: 08.05.2020 11:30
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 14:10 Basis: Wet Weight
 Seq Number: 3134218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1090	24.8	mg/kg	08.11.2020 17:07		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.11.2020 23:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.11.2020 23:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.11.2020 23:11	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.11.2020 23:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-130	08.11.2020 23:11	
o-Terphenyl	84-15-1	118	%	70-130	08.11.2020 23:11	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-2 1'
Lab Sample Id: 669566-005

Matrix: Soil
Date Collected: 08.05.2020 11:30

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.13.2020 05:25	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.13.2020 05:25	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.13.2020 05:25	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.13.2020 05:25	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.13.2020 05:25	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.13.2020 05:25	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.13.2020 05:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.13.2020 05:25	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.13.2020 05:25	



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Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-2 3' Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-006 Date Collected: 08.05.2020 11:31
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 14:10 Basis: Wet Weight
 Seq Number: 3134218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	293	5.02	mg/kg	08.11.2020 17:23		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.11.2020 23:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.11.2020 23:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.11.2020 23:30	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.11.2020 23:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	08.11.2020 23:30	
o-Terphenyl	84-15-1	120	%	70-130	08.11.2020 23:30	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-2 3'
Lab Sample Id: 669566-006

Matrix: Soil
Date Collected: 08.05.2020 11:31

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.2020 05:45	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.2020 05:45	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.2020 05:45	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.2020 05:45	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.2020 05:45	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.2020 05:45	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.2020 05:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.13.2020 05:45	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.13.2020 05:45	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-2 5' Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-007 Date Collected: 08.05.2020 11:32
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 14:10 Basis: Wet Weight
 Seq Number: 3134218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	218	4.96	mg/kg	08.11.2020 17:28		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.11.2020 23:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.11.2020 23:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.11.2020 23:49	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.11.2020 23:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	08.11.2020 23:49	
o-Terphenyl	84-15-1	118	%	70-130	08.11.2020 23:49	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-2 5'
Lab Sample Id: 669566-007

Matrix: Soil
Date Collected: 08.05.2020 11:32

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.2020 06:05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.2020 06:05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.2020 06:05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.2020 06:05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.2020 06:05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.2020 06:05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.2020 06:05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.13.2020 06:05		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.13.2020 06:05		



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-4 1'** Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-008 Date Collected: 08.05.2020 09:44
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 14:10 Basis: Wet Weight
 Seq Number: 3134218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	987	4.98	mg/kg	08.11.2020 17:34		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 00:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	581	50.0	mg/kg	08.12.2020 00:08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 00:08	U	1
Total TPH	PHC635	581	50.0	mg/kg	08.12.2020 00:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	08.12.2020 00:08	
o-Terphenyl	84-15-1	125	%	70-130	08.12.2020 00:08	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-4 1'
Lab Sample Id: 669566-008

Matrix: Soil
Date Collected: 08.05.2020 09:44

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.13.2020 08:15

Basis: Wet Weight

Seq Number: 3134537

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.2020 12:31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.2020 12:31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.2020 12:31	UX	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.2020 12:31	UX	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.2020 12:31	UX	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.2020 12:31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.2020 12:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.13.2020 12:31	
1,4-Difluorobenzene	540-36-3	117	%	70-130	08.13.2020 12:31	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-4 3'** Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-009 Date Collected: 08.05.2020 09:45
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 14:10 Basis: Wet Weight
 Seq Number: 3134218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	145	5.00	mg/kg	08.11.2020 17:50		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 00:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 00:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 00:27	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 00:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	08.12.2020 00:27	
o-Terphenyl	84-15-1	118	%	70-130	08.12.2020 00:27	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-4 3'**
Lab Sample Id: 669566-009

Matrix: Soil
Date Collected: 08.05.2020 09:45

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.13.2020 08:15

Basis: Wet Weight

Seq Number: 3134537

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.13.2020 12:52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.13.2020 12:52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.13.2020 12:52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.13.2020 12:52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.13.2020 12:52	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.13.2020 12:52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.13.2020 12:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.13.2020 12:52	
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.13.2020 12:52	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-4 5' Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-010 Date Collected: 08.05.2020 09:54
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 14:10 Basis: Wet Weight
 Seq Number: 3134218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	246	25.0	mg/kg	08.11.2020 17:55		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.12.2020 00:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.12.2020 00:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.12.2020 00:45	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.12.2020 00:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	08.12.2020 00:45	
o-Terphenyl	84-15-1	120	%	70-130	08.12.2020 00:45	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-4 5'
Lab Sample Id: 669566-010

Matrix: Soil
Date Collected: 08.05.2020 09:54

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.13.2020 08:15

Basis: Wet Weight

Seq Number: 3134537

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.2020 13:12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.2020 13:12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.2020 13:12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.2020 13:12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.2020 13:12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.2020 13:12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.2020 13:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	116	%	70-130	08.13.2020 13:12	
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.13.2020 13:12	

**Certificate of Analytical Results 669566****Larson and Associates, Inc., Midland, TX**

Pad 10 2DH

Sample Id: S-4 7'
Lab Sample Id: 669566-011

Matrix: Soil
Date Collected: 08.05.2020 09:55

Date Received: 08.10.2020 09:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.11.2020 12:15

Basis: Wet Weight

Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	580	5.04	mg/kg	08.11.2020 19:40		1



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-7 1' Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-012 Date Collected: 08.05.2020 09:28
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 12:15 Basis: Wet Weight
 Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	74.2	25.0	mg/kg	08.11.2020 19:59		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.12.2020 01:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.12.2020 01:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.12.2020 01:04	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.12.2020 01:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	08.12.2020 01:04	
o-Terphenyl	84-15-1	121	%	70-130	08.12.2020 01:04	



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Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-7 1'
Lab Sample Id: 669566-012

Matrix: Soil
Date Collected: 08.05.2020 09:28

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.13.2020 08:15

Basis: Wet Weight

Seq Number: 3134537

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.2020 13:33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.13.2020 13:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.2020 13:33	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.13.2020 13:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.2020 13:33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.2020 13:33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.13.2020 13:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.13.2020 13:33	
1,4-Difluorobenzene	540-36-3	117	%	70-130	08.13.2020 13:33	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-7 3' Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-013 Date Collected: 08.05.2020 09:29
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 12:15 Basis: Wet Weight
 Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	38.5	24.8	mg/kg	08.11.2020 20:05		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 01:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 01:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 01:42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 01:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	08.12.2020 01:42	
o-Terphenyl	84-15-1	119	%	70-130	08.12.2020 01:42	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-7 3'
Lab Sample Id: 669566-013

Matrix: Soil
Date Collected: 08.05.2020 09:29

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.13.2020 08:15

Basis: Wet Weight

Seq Number: 3134537

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.2020 13:53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.2020 13:53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.2020 13:53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.2020 13:53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.2020 13:53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.2020 13:53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.2020 13:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	118	%	70-130	08.13.2020 13:53	
4-Bromofluorobenzene	460-00-4	92	%	70-130	08.13.2020 13:53	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-7 5' Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-014 Date Collected: 08.05.2020 09:34
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 12:15 Basis: Wet Weight
 Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	69.2	5.05	mg/kg	08.11.2020 20:11		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.12.2020 02:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.12.2020 02:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.12.2020 02:01	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.12.2020 02:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-130	08.12.2020 02:01	
o-Terphenyl	84-15-1	116	%	70-130	08.12.2020 02:01	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-7 5'
Lab Sample Id: 669566-014

Matrix: Soil
Date Collected: 08.05.2020 09:34

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.13.2020 08:15

Basis: Wet Weight

Seq Number: 3134537

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.2020 14:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.13.2020 14:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.2020 14:14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.13.2020 14:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.2020 14:14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.2020 14:14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.13.2020 14:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	113	%	70-130	08.13.2020 14:14		
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.13.2020 14:14		

**Certificate of Analytical Results 669566****Larson and Associates, Inc., Midland, TX**

Pad 10 2DH

Sample Id: S-7 7'
Lab Sample Id: 669566-015Matrix: Soil
Date Collected: 08.05.2020 09:35

Date Received: 08.10.2020 09:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.11.2020 12:15

Basis: Wet Weight

Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	212	4.95	mg/kg	08.11.2020 20:18		1



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-8 1'** Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-016 Date Collected: 08.05.2020 09:13
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 12:15 Basis: Wet Weight
 Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	783	50.2	mg/kg	08.11.2020 20:37		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.12.2020 02:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	268	49.8	mg/kg	08.12.2020 02:20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.12.2020 02:20	U	1
Total TPH	PHC635	268	49.8	mg/kg	08.12.2020 02:20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	08.12.2020 02:20	
o-Terphenyl	84-15-1	129	%	70-130	08.12.2020 02:20	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-8 1'**
Lab Sample Id: 669566-016

Matrix: Soil
Date Collected: 08.05.2020 09:13

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.11.2020 11:30

Basis: Wet Weight

Seq Number: 3134279

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.11.2020 16:06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.11.2020 16:06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.11.2020 16:06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.11.2020 16:06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.11.2020 16:06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.11.2020 16:06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.11.2020 16:06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	133	%	70-130	08.11.2020 16:06	**	
1,4-Difluorobenzene	540-36-3	92	%	70-130	08.11.2020 16:06		



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-8 3'** Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-017 Date Collected: 08.05.2020 09:14
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 12:15 Basis: Wet Weight
 Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	637	24.9	mg/kg	08.11.2020 20:43		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 02:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 02:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 02:38	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 02:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-130	08.12.2020 02:38	
o-Terphenyl	84-15-1	124	%	70-130	08.12.2020 02:38	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-8 3'**
Lab Sample Id: 669566-017

Matrix: Soil
Date Collected: 08.05.2020 09:14

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.11.2020 11:30

Basis: Wet Weight

Seq Number: 3134279

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.11.2020 16:29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.11.2020 16:29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.11.2020 16:29	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.11.2020 16:29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.11.2020 16:29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.11.2020 16:29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.11.2020 16:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	08.11.2020 16:29	
4-Bromofluorobenzene	460-00-4	128	%	70-130	08.11.2020 16:29	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-8 5'** Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-018 Date Collected: 08.05.2020 09:16
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 12:15 Basis: Wet Weight
 Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	125	24.8	mg/kg	08.11.2020 20:49		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 02:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 02:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 02:57	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 02:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-130	08.12.2020 02:57	
o-Terphenyl	84-15-1	113	%	70-130	08.12.2020 02:57	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-8 5'**
Lab Sample Id: 669566-018

Matrix: Soil
Date Collected: 08.05.2020 09:16

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.11.2020 11:30

Basis: Wet Weight

Seq Number: 3134279

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.11.2020 16:51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.11.2020 16:51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.11.2020 16:51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.11.2020 16:51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.11.2020 16:51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.11.2020 16:51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.11.2020 16:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	08.11.2020 16:51	
4-Bromofluorobenzene	460-00-4	123	%	70-130	08.11.2020 16:51	

**Certificate of Analytical Results 669566****Larson and Associates, Inc., Midland, TX**

Pad 10 2DH

Sample Id: **S-8 7'**
Lab Sample Id: 669566-019

Matrix: Soil
Date Collected: 08.05.2020 09:17

Date Received: 08.10.2020 09:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.11.2020 12:15

Basis: Wet Weight

Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.11.2020 20:56	U	1



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-9 1'** Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-020 Date Collected: 08.05.2020 10:55
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 12:15 Basis: Wet Weight
 Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	454	5.03	mg/kg	08.11.2020 21:02		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 03:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 03:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 03:16	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 03:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-130	08.12.2020 03:16	
o-Terphenyl	84-15-1	120	%	70-130	08.12.2020 03:16	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-9 1'**
Lab Sample Id: 669566-020

Matrix: Soil
Date Collected: 08.05.2020 10:55

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.11.2020 11:30

Basis: Wet Weight

Seq Number: 3134279

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.11.2020 17:12	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.11.2020 17:12	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.11.2020 17:12	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.11.2020 17:12	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.11.2020 17:12	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.11.2020 17:12	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.11.2020 17:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	70-130	08.11.2020 17:12	
4-Bromofluorobenzene	460-00-4	125	%	70-130	08.11.2020 17:12	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-9 3'** Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-021 Date Collected: 08.05.2020 10:56
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 12:15 Basis: Wet Weight
 Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	183	4.97	mg/kg	08.11.2020 21:08		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.12.2020 03:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.12.2020 03:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.12.2020 03:35	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.12.2020 03:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	08.12.2020 03:35	
o-Terphenyl	84-15-1	119	%	70-130	08.12.2020 03:35	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-9 3'**
Lab Sample Id: 669566-021

Matrix: Soil
Date Collected: 08.05.2020 10:56

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.11.2020 11:30

Basis: Wet Weight

Seq Number: 3134279

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.11.2020 17:35	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.11.2020 17:35	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.11.2020 17:35	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.11.2020 17:35	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.11.2020 17:35	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.11.2020 17:35	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.11.2020 17:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	89	%	70-130	08.11.2020 17:35		
4-Bromofluorobenzene	460-00-4	134	%	70-130	08.11.2020 17:35	**	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: **S-9 5'** Matrix: Soil Date Received: 08.10.2020 09:00
 Lab Sample Id: 669566-022 Date Collected: 08.05.2020 11:19
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.11.2020 12:15 Basis: Wet Weight
 Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2080	24.8	mg/kg	08.12.2020 08:38		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.11.2020 17:00 Basis: Wet Weight
 Seq Number: 3134290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 03:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 03:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 03:53	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 03:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-130	08.12.2020 03:53	
o-Terphenyl	84-15-1	116	%	70-130	08.12.2020 03:53	



Certificate of Analytical Results 669566

Larson and Associates, Inc., Midland, TX

Pad 10 2DH

Sample Id: S-9 5'
Lab Sample Id: 669566-022

Matrix: Soil
Date Collected: 08.05.2020 11:19

Date Received: 08.10.2020 09:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.11.2020 11:30

Basis: Wet Weight

Seq Number: 3134279

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.11.2020 17:58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.11.2020 17:58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.11.2020 17:58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.11.2020 17:58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.11.2020 17:58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.11.2020 17:58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.11.2020 17:58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	90	%	70-130	08.11.2020 17:58		
4-Bromofluorobenzene	460-00-4	140	%	70-130	08.11.2020 17:58	**	

**Certificate of Analytical Results 669566****Larson and Associates, Inc., Midland, TX**

Pad 10 2DH

Sample Id: **S-9 10'**
Lab Sample Id: 669566-023

Matrix: Soil
Date Collected: 08.05.2020 11:20

Date Received: 08.10.2020 09:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.11.2020 12:15

Basis: Wet Weight

Seq Number: 3134230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24.1	4.99	mg/kg	08.11.2020 21:34		1

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Larson and Associates, Inc.
Pad 10 2DH

Analytical Method: Chloride by EPA 300

Seq Number: 3134230

MB Sample Id: 7709167-1-BLK

Matrix: Solid

LCS Sample Id: 7709167-1-BKS

Prep Method: E300P

Date Prep: 08.11.2020

LCSD Sample Id: 7709167-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	274	110	275	110	90-110	0	20	mg/kg	08.11.2020 19:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3134218

MB Sample Id: 7709184-1-BLK

Matrix: Solid

LCS Sample Id: 7709184-1-BKS

Prep Method: E300P

Date Prep: 08.11.2020

LCSD Sample Id: 7709184-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	264	106	263	105	90-110	0	20	mg/kg	08.11.2020 15:08	

Analytical Method: Chloride by EPA 300

Seq Number: 3134230

Parent Sample Id: 669566-011

Matrix: Soil

MS Sample Id: 669566-011 S

Prep Method: E300P

Date Prep: 08.11.2020

MSD Sample Id: 669566-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	580	252	826	98	822	96	90-110	0	20	mg/kg	08.11.2020 19:46	

Analytical Method: Chloride by EPA 300

Seq Number: 3134230

Parent Sample Id: 669566-021

Matrix: Soil

MS Sample Id: 669566-021 S

Prep Method: E300P

Date Prep: 08.11.2020

MSD Sample Id: 669566-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	183	249	438	102	435	101	90-110	1	20	mg/kg	08.11.2020 21:15	

Analytical Method: Chloride by EPA 300

Seq Number: 3134218

Parent Sample Id: 669565-015

Matrix: Soil

MS Sample Id: 669565-015 S

Prep Method: E300P

Date Prep: 08.11.2020

MSD Sample Id: 669565-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	223	250	484	104	483	104	90-110	0	20	mg/kg	08.11.2020 15:38	

Analytical Method: Chloride by EPA 300

Seq Number: 3134218

Parent Sample Id: 669566-003

Matrix: Soil

MS Sample Id: 669566-003 S

Prep Method: E300P

Date Prep: 08.11.2020

MSD Sample Id: 669566-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	259	250	519	104	520	104	90-110	0	20	mg/kg	08.11.2020 16:51	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Larson and Associates, Inc.

Pad 10 2DH

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134290

MB Sample Id: 7709216-1-BLK

Matrix: Solid

LCS Sample Id: 7709216-1-BKS

Prep Method: SW8015P

Date Prep: 08.11.2020

LCSD Sample Id: 7709216-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	884	88	893	89	70-130	1	20	mg/kg	08.11.2020 20:58	
Diesel Range Organics (DRO)	<50.0	1000	907	91	911	91	70-130	0	20	mg/kg	08.11.2020 20:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		128		130		70-130	%	08.11.2020 20:58
o-Terphenyl	130		127		129		70-130	%	08.11.2020 20:58

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134290

Matrix: Solid

MB Sample Id: 7709216-1-BLK

Prep Method: SW8015P

Date Prep: 08.11.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.11.2020 20:39	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134290

Matrix: Soil

Parent Sample Id: 669566-001

MS Sample Id: 669566-001 S

Prep Method: SW8015P

Date Prep: 08.11.2020

MSD Sample Id: 669566-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	95.0	999	908	81	896	80	70-130	1	20	mg/kg	08.11.2020 21:55	
Diesel Range Organics (DRO)	4540	999	4480	0	4490	0	70-130	0	20	mg/kg	08.11.2020 21:55	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		129		70-130	%	08.11.2020 21:55
o-Terphenyl	127		119		70-130	%	08.11.2020 21:55

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134279

Matrix: Solid

MB Sample Id: 7709270-1-BLK

LCS Sample Id: 7709270-1-BKS

Prep Method: SW5035A

Date Prep: 08.11.2020

LCSD Sample Id: 7709270-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0883	88	0.0915	92	70-130	4	35	mg/kg	08.11.2020 13:01	
Toluene	<0.00200	0.100	0.0849	85	0.0897	90	70-130	5	35	mg/kg	08.11.2020 13:01	
Ethylbenzene	<0.00200	0.100	0.0954	95	0.0983	98	70-130	3	35	mg/kg	08.11.2020 13:01	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.194	97	70-130	3	35	mg/kg	08.11.2020 13:01	
o-Xylene	<0.00200	0.100	0.0887	89	0.0905	91	70-130	2	35	mg/kg	08.11.2020 13:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		101		101		70-130	%	08.11.2020 13:01
4-Bromofluorobenzene	99		99		99		70-130	%	08.11.2020 13:01

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Larson and Associates, Inc.
Pad 10 2DH

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134386

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.12.2020

MB Sample Id: 7709352-1-BLK

LCS Sample Id: 7709352-1-BKS

LCSD Sample Id: 7709352-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.116	116	0.108	108	70-130	7	35	mg/kg	08.12.2020 09:17	
Toluene	<0.00200	0.100	0.123	123	0.116	116	70-130	6	35	mg/kg	08.12.2020 09:17	
Ethylbenzene	<0.00200	0.100	0.106	106	0.0995	100	70-130	6	35	mg/kg	08.12.2020 09:17	
m,p-Xylenes	<0.00400	0.200	0.216	108	0.202	101	70-130	7	35	mg/kg	08.12.2020 09:17	
o-Xylene	<0.00200	0.100	0.105	105	0.0982	98	70-130	7	35	mg/kg	08.12.2020 09:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		101		100		70-130	%	08.12.2020 09:17
4-Bromofluorobenzene	100		98		99		70-130	%	08.12.2020 09:17

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134387

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.12.2020

MB Sample Id: 7709354-1-BLK

LCS Sample Id: 7709354-1-BKS

LCSD Sample Id: 7709354-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.109	109	0.103	103	70-130	6	35	mg/kg	08.12.2020 20:32	
Toluene	<0.00200	0.100	0.104	104	0.106	106	70-130	2	35	mg/kg	08.12.2020 20:32	
Ethylbenzene	<0.00200	0.100	0.0996	100	0.0941	94	70-130	6	35	mg/kg	08.12.2020 20:32	
m,p-Xylenes	<0.00400	0.200	0.203	102	0.191	96	70-130	6	35	mg/kg	08.12.2020 20:32	
o-Xylene	<0.00200	0.100	0.0997	100	0.0936	94	70-130	6	35	mg/kg	08.12.2020 20:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		99		70-130	%	08.12.2020 20:32
4-Bromofluorobenzene	101		99		98		70-130	%	08.12.2020 20:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134537

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.13.2020

MB Sample Id: 7709442-1-BLK

LCS Sample Id: 7709442-1-BKS

LCSD Sample Id: 7709442-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.102	102	0.105	105	70-130	3	35	mg/kg	08.13.2020 09:00	
Toluene	<0.00200	0.100	0.0967	97	0.0967	97	70-130	0	35	mg/kg	08.13.2020 09:00	
Ethylbenzene	<0.00200	0.100	0.0956	96	0.0942	94	70-130	1	35	mg/kg	08.13.2020 09:00	
m,p-Xylenes	<0.00400	0.200	0.191	96	0.186	93	70-130	3	35	mg/kg	08.13.2020 09:00	
o-Xylene	<0.00200	0.100	0.0929	93	0.0911	91	70-130	2	35	mg/kg	08.13.2020 09:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		99		101		70-130	%	08.13.2020 09:00
4-Bromofluorobenzene	90		98		95		70-130	%	08.13.2020 09:00

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Larson and Associates, Inc.

Pad 10 2DH

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134279

Parent Sample Id: 669566-021

Matrix: Soil

MS Sample Id: 669566-021 S

Prep Method: SW5035A

Date Prep: 08.11.2020

MSD Sample Id: 669566-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0884	88	0.0820	82	70-130	8	35	mg/kg	08.11.2020 13:46	
Toluene	<0.00201	0.100	0.0844	84	0.0787	79	70-130	7	35	mg/kg	08.11.2020 13:46	
Ethylbenzene	<0.00201	0.100	0.0934	93	0.0871	87	70-130	7	35	mg/kg	08.11.2020 13:46	
m,p-Xylenes	<0.00402	0.201	0.185	92	0.172	86	70-130	7	35	mg/kg	08.11.2020 13:46	
o-Xylene	<0.00201	0.100	0.0857	86	0.0819	82	70-130	5	35	mg/kg	08.11.2020 13:46	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		70-130	%	08.11.2020 13:46
4-Bromofluorobenzene	102		103		70-130	%	08.11.2020 13:46

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134386

Parent Sample Id: 669565-019

Matrix: Soil

MS Sample Id: 669565-019 S

Prep Method: SW5035A

Date Prep: 08.12.2020

MSD Sample Id: 669565-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.113	113	0.0991	100	70-130	13	35	mg/kg	08.12.2020 10:05	
Toluene	<0.00200	0.100	0.0974	97	0.0892	90	70-130	9	35	mg/kg	08.12.2020 10:05	
Ethylbenzene	<0.00200	0.100	0.0882	88	0.0744	75	70-130	17	35	mg/kg	08.12.2020 10:05	
m,p-Xylenes	<0.00401	0.200	0.156	78	0.134	67	70-130	15	35	mg/kg	08.12.2020 10:05	X
o-Xylene	<0.00200	0.100	0.0899	90	0.0742	75	70-130	19	35	mg/kg	08.12.2020 10:05	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		100		70-130	%	08.12.2020 10:05
4-Bromofluorobenzene	99		100		70-130	%	08.12.2020 10:05

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134387

Parent Sample Id: 669781-014

Matrix: Soil

MS Sample Id: 669781-014 S

Prep Method: SW5035A

Date Prep: 08.12.2020

MSD Sample Id: 669781-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0940	94	0.0955	96	70-130	2	35	mg/kg	08.12.2020 21:13	
Toluene	<0.00200	0.0998	0.0924	93	0.0898	90	70-130	3	35	mg/kg	08.12.2020 21:13	
Ethylbenzene	<0.00200	0.0998	0.0862	86	0.0858	86	70-130	0	35	mg/kg	08.12.2020 21:13	
m,p-Xylenes	<0.00399	0.200	0.175	88	0.174	87	70-130	1	35	mg/kg	08.12.2020 21:13	
o-Xylene	<0.00200	0.0998	0.0857	86	0.0850	85	70-130	1	35	mg/kg	08.12.2020 21:13	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	08.12.2020 21:13
4-Bromofluorobenzene	102		99		70-130	%	08.12.2020 21:13

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Larson and Associates, Inc.
Pad 10 2DH

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134537

Parent Sample Id: 669566-008

Matrix: Soil

MS Sample Id: 669566-008 S

Prep Method: SW5035A

Date Prep: 08.13.2020

MSD Sample Id: 669566-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.101	101	0.104	104	70-130	3	35	mg/kg	08.13.2020 09:41	
Toluene	<0.00200	0.0998	0.0835	84	0.0810	81	70-130	3	35	mg/kg	08.13.2020 09:41	
Ethylbenzene	<0.00200	0.0998	0.0699	70	0.0662	66	70-130	5	35	mg/kg	08.13.2020 09:41	X
m,p-Xylenes	<0.00399	0.200	0.134	67	0.122	61	70-130	9	35	mg/kg	08.13.2020 09:41	X
o-Xylene	<0.00200	0.0998	0.0664	67	0.0607	61	70-130	9	35	mg/kg	08.13.2020 09:41	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		107		70-130	%	08.13.2020 09:41
4-Bromofluorobenzene	94		95		70-130	%	08.13.2020 09:41

 MS/MSD Percent Recovery
 Relative Percent Difference
 LCS/LCSD Recovery
 Log Difference

 $[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

 LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

 MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

PAGE 1 OF 2
H
R: TJ4D5

FIELD NOTES

TURN AROUND TIME

1 DAY ☐

2 DAY ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 101.2 THERM#: 1008
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

10/05/20

CHAIN-OF-CUSTODY

ॐ
 नमो
 भगवते
 वासुदेवाय

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.**Date/ Time Received:** 08.10.2020 09.00.00 AM**Work Order #:** 669566**Acceptable Temperature Range:** 0 - 6 degC**Air and Metal samples Acceptable Range:** Ambient**Temperature Measuring device used :** IR-8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes BTEX was in bulk container
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 08.10.2020

Checklist reviewed by:

Holly Taylor

Date: 08.11.2020

Certificate of Analysis Summary 687603

Larson and Associates, Inc., Midland, TX

Project Name: Salado Draw Pad 10

Project Id: 19-0180-02

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 02.08.2021 10:13

Report Date: 02.18.2021 10:58

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	687603-001	687603-002	687603-003	687603-004	687603-005	687603-006
	<i>Field Id:</i>	S-10 1'	S-10 3'	S-10 5'	S-10 10'	S-11 0.5'	S-11 1'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	02.05.2021 11:55	02.05.2021 12:00	02.05.2021 12:10	02.05.2021 12:20	02.05.2021 10:25	02.05.2021 10:26
BTEX by EPA 8021B	<i>Extracted:</i>	02.09.2021 13:00	02.09.2021 13:00	02.09.2021 13:00	02.09.2021 17:00	02.09.2021 17:00	02.09.2021 17:00
	<i>Analyzed:</i>	02.09.2021 22:25	02.09.2021 22:46	02.09.2021 23:06	02.10.2021 08:16	02.10.2021 08:42	02.10.2021 16:24
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00402 0.00402	<0.00402 0.00402	<0.00404 0.00404	<0.00398 0.00398	<0.00401 0.00401	<0.00399 0.00399
o-Xylene		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	02.09.2021 14:00	02.09.2021 14:00	02.09.2021 14:00	02.09.2021 14:00	02.09.2021 14:00	02.09.2021 16:00
	<i>Analyzed:</i>	02.09.2021 16:22	02.09.2021 16:28	02.09.2021 16:33	02.09.2021 16:38	02.09.2021 16:44	02.09.2021 17:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		5270 50.3	5010 49.5	1430 24.8	61.0 4.95	164 5.02	49.5 X 5.03
TPH by SW8015 Mod	<i>Extracted:</i>	02.09.2021 12:00	02.09.2021 12:00	02.08.2021 12:00	02.08.2021 12:00	02.08.2021 12:00	02.08.2021 12:00
	<i>Analyzed:</i>	02.09.2021 17:20	02.09.2021 18:25	02.08.2021 23:26	02.08.2021 23:47	02.09.2021 00:08	02.09.2021 00:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0
Diesel Range Organics (DRO)		<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0
Total TPH		<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0

BRL - Below Reporting Limit



Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 687603



Larson and Associates, Inc., Midland, TX

Project Name: Salado Draw Pad 10

Project Id: 19-0180-02

Date Received in Lab: Mon 02.08.2021 10:13

Contact: Mark Larson

Report Date: 02.18.2021 10:58

Project Location:

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	687603-007	687603-008	687603-009	687603-010		
	<i>Field Id:</i>	S-12 0.5'	S-12 1'	S-13 0.5'	S-13 1'		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	02.05.2021 10:30	02.05.2021 10:33	02.05.2021 10:38	02.05.2021 10:40		
BTEX by EPA 8021B	<i>Extracted:</i>	02.09.2021 17:00	02.09.2021 17:00	02.09.2021 17:00	02.10.2021 15:00		
	<i>Analyzed:</i>	02.10.2021 16:50	02.10.2021 17:16	02.10.2021 17:42	02.11.2021 00:15		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
m,p-Xylenes		<0.00399 0.00399	<0.00400 0.00400	<0.00399 0.00399	<0.00400 0.00400		
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Chloride by EPA 300	<i>Extracted:</i>	02.09.2021 16:00	02.09.2021 16:00	02.09.2021 16:00	02.09.2021 16:00		
	<i>Analyzed:</i>	02.09.2021 17:47	02.09.2021 17:53	02.09.2021 18:00	02.09.2021 18:06		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		35.6 4.98	35.8 5.04	20.8 5.05	32.7 4.99		
TPH by SW8015 Mod	<i>Extracted:</i>	02.08.2021 12:00	02.08.2021 12:00	02.08.2021 12:00	02.08.2021 12:00		
	<i>Analyzed:</i>	02.09.2021 00:51	02.09.2021 01:12	02.09.2021 01:33	02.09.2021 01:54		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9		
Diesel Range Organics (DRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9		
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9		
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 687603

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Salado Draw Pad 10

19-0180-02

02.18.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.18.2021

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **687603**
Salado Draw Pad 10
Project Address:

Mark Larson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 687603. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 687603 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Holly Taylor".

Holly Taylor
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 687603****Larson and Associates, Inc., Midland, TX**

Salado Draw Pad 10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-10 1'	S	02.05.2021 11:55		687603-001
S-10 3'	S	02.05.2021 12:00		687603-002
S-10 5'	S	02.05.2021 12:10		687603-003
S-10 10'	S	02.05.2021 12:20		687603-004
S-11 0.5'	S	02.05.2021 10:25		687603-005
S-11 1'	S	02.05.2021 10:26		687603-006
S-12 0.5'	S	02.05.2021 10:30		687603-007
S-12 1'	S	02.05.2021 10:33		687603-008
S-13 0.5'	S	02.05.2021 10:38		687603-009
S-13 1'	S	02.05.2021 10:40		687603-010

**CASE NARRATIVE****Client Name: Larson and Associates, Inc.****Project Name: Salado Draw Pad 10**Project ID: 19-0180-02
Work Order Number(s): 687603Report Date: 02.18.2021
Date Received: 02.08.2021**Sample receipt non conformances and comments:****Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3150314 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 687603-003.

Batch: LBA-3150534 Chloride by EPA 300

Lab Sample ID 687758-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 687603-006, -007, -008, -009, -010.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-10 1'**
Lab Sample Id: 687603-001

Matrix: Soil
Date Collected: 02.05.2021 11:55

Date Received: 02.08.2021 10:13

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 02.09.2021 14:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150531

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5270	50.3	mg/kg	02.09.2021 16:22		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 02.09.2021 12:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.09.2021 17:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.09.2021 17:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.09.2021 17:20	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.09.2021 17:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	02.09.2021 17:20	
o-Terphenyl	84-15-1	97	%	70-130	02.09.2021 17:20	



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-10 1'**
Lab Sample Id: 687603-001

Matrix: Soil
Date Collected: 02.05.2021 11:55

Date Received: 02.08.2021 10:13

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 02.09.2021 13:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150521

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.09.2021 22:25	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.09.2021 22:25	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.09.2021 22:25	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.09.2021 22:25	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.09.2021 22:25	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.09.2021 22:25	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.09.2021 22:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	02.09.2021 22:25		
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.09.2021 22:25		



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-10 3'**
Lab Sample Id: 687603-002

Matrix: Soil
Date Collected: 02.05.2021 12:00

Date Received: 02.08.2021 10:13

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 02.09.2021 14:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150531

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5010	49.5	mg/kg	02.09.2021 16:28		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 02.09.2021 12:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.09.2021 18:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.09.2021 18:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.09.2021 18:25	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.09.2021 18:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	83	%	70-130	02.09.2021 18:25		
o-Terphenyl	84-15-1	96	%	70-130	02.09.2021 18:25		



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-10 3'**
Lab Sample Id: 687603-002

Matrix: Soil
Date Collected: 02.05.2021 12:00

Date Received: 02.08.2021 10:13

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 02.09.2021 13:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150521

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.09.2021 22:46	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.09.2021 22:46	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.09.2021 22:46	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.09.2021 22:46	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.09.2021 22:46	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.09.2021 22:46	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.09.2021 22:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.09.2021 22:46	
4-Bromofluorobenzene	460-00-4	106	%	70-130	02.09.2021 22:46	



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: S-10 5'
Lab Sample Id: 687603-003

Matrix: Soil
Date Collected: 02.05.2021 12:10

Date Received: 02.08.2021 10:13

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 02.09.2021 14:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150531

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1430	24.8	mg/kg	02.09.2021 16:33		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: ARM

Analyst: ARM

Date Prep: 02.08.2021 12:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.08.2021 23:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.08.2021 23:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.08.2021 23:26	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.08.2021 23:26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	114	%	70-130	02.08.2021 23:26		
o-Terphenyl	84-15-1	135	%	70-130	02.08.2021 23:26	**	



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-10 5'**
Lab Sample Id: 687603-003

Matrix: Soil
Date Collected: 02.05.2021 12:10

Date Received: 02.08.2021 10:13

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 02.09.2021 13:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150521

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.09.2021 23:06	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.09.2021 23:06	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.09.2021 23:06	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	02.09.2021 23:06	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.09.2021 23:06	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.09.2021 23:06	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.09.2021 23:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.09.2021 23:06	
4-Bromofluorobenzene	460-00-4	104	%	70-130	02.09.2021 23:06	



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-10 10'**
Lab Sample Id: 687603-004

Matrix: Soil
Date Collected: 02.05.2021 12:20

Date Received: 02.08.2021 10:13

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 02.09.2021 14:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150531

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	61.0	4.95	mg/kg	02.09.2021 16:38		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: ARM

Analyst: ARM

Date Prep: 02.08.2021 12:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.08.2021 23:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.08.2021 23:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.08.2021 23:47	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.08.2021 23:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	02.08.2021 23:47	
o-Terphenyl	84-15-1	107	%	70-130	02.08.2021 23:47	



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-10 10'**
Lab Sample Id: 687603-004

Matrix: Soil
Date Collected: 02.05.2021 12:20

Date Received: 02.08.2021 10:13

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 02.09.2021 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150567

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.10.2021 08:16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.10.2021 08:16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.10.2021 08:16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.10.2021 08:16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.10.2021 08:16	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.10.2021 08:16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.10.2021 08:16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	02.10.2021 08:16		
1,4-Difluorobenzene	540-36-3	71	%	70-130	02.10.2021 08:16		



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-11 0.5'**
Lab Sample Id: 687603-005

Matrix: Soil
Date Collected: 02.05.2021 10:25

Date Received: 02.08.2021 10:13

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 02.09.2021 14:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150531

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	164	5.02	mg/kg	02.09.2021 16:44		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: ARM

Analyst: ARM

Date Prep: 02.08.2021 12:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.09.2021 00:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.09.2021 00:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.09.2021 00:08	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.09.2021 00:08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	127	%	70-130	02.09.2021 00:08		
o-Terphenyl	84-15-1	122	%	70-130	02.09.2021 00:08		



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-11 0.5'**
Lab Sample Id: 687603-005

Matrix: Soil
Date Collected: 02.05.2021 10:25

Date Received: 02.08.2021 10:13

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 02.09.2021 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150567

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.10.2021 08:42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.10.2021 08:42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.10.2021 08:42	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.10.2021 08:42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.10.2021 08:42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.10.2021 08:42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.10.2021 08:42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.10.2021 08:42		
4-Bromofluorobenzene	460-00-4	110	%	70-130	02.10.2021 08:42		



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: S-11 1'
Lab Sample Id: 687603-006

Matrix: Soil
Date Collected: 02.05.2021 10:26

Date Received: 02.08.2021 10:13

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 02.09.2021 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150534

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	49.5	5.03	mg/kg	02.09.2021 17:29	X	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: ARM

Analyst: ARM

Date Prep: 02.08.2021 12:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.09.2021 00:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.09.2021 00:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.09.2021 00:30	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.09.2021 00:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	02.09.2021 00:30	
o-Terphenyl	84-15-1	105	%	70-130	02.09.2021 00:30	



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: S-11 1'
Lab Sample Id: 687603-006

Matrix: Soil
Date Collected: 02.05.2021 10:26

Date Received: 02.08.2021 10:13

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 02.09.2021 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150567

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.10.2021 16:24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.10.2021 16:24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.10.2021 16:24	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.10.2021 16:24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.10.2021 16:24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.10.2021 16:24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.10.2021 16:24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.10.2021 16:24		
1,4-Difluorobenzene	540-36-3	80	%	70-130	02.10.2021 16:24		



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: S-12 0.5'
Lab Sample Id: 687603-007

Matrix: Soil
Date Collected: 02.05.2021 10:30

Date Received: 02.08.2021 10:13

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 02.09.2021 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150534

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	35.6	4.98	mg/kg	02.09.2021 17:47		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: ARM

Analyst: ARM

Date Prep: 02.08.2021 12:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.09.2021 00:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.09.2021 00:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.09.2021 00:51	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.09.2021 00:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-130	02.09.2021 00:51	
o-Terphenyl	84-15-1	119	%	70-130	02.09.2021 00:51	



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-12 0.5'**
Lab Sample Id: 687603-007

Matrix: Soil
Date Collected: 02.05.2021 10:30

Date Received: 02.08.2021 10:13

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 02.09.2021 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150567

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.10.2021 16:50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.10.2021 16:50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.10.2021 16:50	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.10.2021 16:50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.10.2021 16:50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.10.2021 16:50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.10.2021 16:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	02.10.2021 16:50	
1,4-Difluorobenzene	540-36-3	90	%	70-130	02.10.2021 16:50	



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: S-12 1'
Lab Sample Id: 687603-008

Matrix: Soil
Date Collected: 02.05.2021 10:33

Date Received: 02.08.2021 10:13

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 02.09.2021 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150534

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	35.8	5.04	mg/kg	02.09.2021 17:53		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: ARM

Analyst: ARM

Date Prep: 02.08.2021 12:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.09.2021 01:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.09.2021 01:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.09.2021 01:12	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.09.2021 01:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	02.09.2021 01:12	
o-Terphenyl	84-15-1	108	%	70-130	02.09.2021 01:12	



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: S-12 1'
Lab Sample Id: 687603-008

Matrix: Soil
Date Collected: 02.05.2021 10:33

Date Received: 02.08.2021 10:13

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 02.09.2021 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150567

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.10.2021 17:16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.10.2021 17:16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.10.2021 17:16	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.10.2021 17:16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.10.2021 17:16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.10.2021 17:16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.10.2021 17:16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	02.10.2021 17:16		
1,4-Difluorobenzene	540-36-3	93	%	70-130	02.10.2021 17:16		



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-13 0.5'**
Lab Sample Id: 687603-009

Matrix: Soil
Date Collected: 02.05.2021 10:38

Date Received: 02.08.2021 10:13

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 02.09.2021 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150534

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.8	5.05	mg/kg	02.09.2021 18:00		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: ARM

Analyst: ARM

Date Prep: 02.08.2021 12:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.09.2021 01:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.09.2021 01:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.09.2021 01:33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.09.2021 01:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	02.09.2021 01:33	
o-Terphenyl	84-15-1	105	%	70-130	02.09.2021 01:33	



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: **S-13 0.5'**
Lab Sample Id: 687603-009

Matrix: Soil
Date Collected: 02.05.2021 10:38

Date Received: 02.08.2021 10:13

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 02.09.2021 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150567

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.10.2021 17:42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.10.2021 17:42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.10.2021 17:42	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.10.2021 17:42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.10.2021 17:42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.10.2021 17:42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.10.2021 17:42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	84	%	70-130	02.10.2021 17:42		
4-Bromofluorobenzene	460-00-4	104	%	70-130	02.10.2021 17:42		



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: S-13 1'
Lab Sample Id: 687603-010

Matrix: Soil
Date Collected: 02.05.2021 10:40

Date Received: 02.08.2021 10:13

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 02.09.2021 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150534

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.7	4.99	mg/kg	02.09.2021 18:06		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: ARM

Analyst: ARM

Date Prep: 02.08.2021 12:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.09.2021 01:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.09.2021 01:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.09.2021 01:54	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.09.2021 01:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	107	%	70-130	02.09.2021 01:54		
o-Terphenyl	84-15-1	99	%	70-130	02.09.2021 01:54		



Certificate of Analytical Results 687603

Larson and Associates, Inc., Midland, TX

Salado Draw Pad 10

Sample Id: S-13 1'
Lab Sample Id: 687603-010

Matrix: Soil
Date Collected: 02.05.2021 10:40

Date Received: 02.08.2021 10:13

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 02.10.2021 15:00

% Moisture:
Basis: Wet Weight

Seq Number: 3150727

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.11.2021 00:15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.11.2021 00:15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.11.2021 00:15	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.11.2021 00:15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.11.2021 00:15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.11.2021 00:15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.11.2021 00:15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	130	%	70-130	02.11.2021 00:15		
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.11.2021 00:15		

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Larson and Associates, Inc.
Salado Draw Pad 10

Analytical Method: Chloride by EPA 300

Seq Number: 3150531

MB Sample Id: 7721119-1-BLK

Matrix: Solid

LCS Sample Id: 7721119-1-BKS

Prep Method: E300P

Date Prep: 02.09.2021

LCSD Sample Id: 7721119-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	254	102	256	102	90-110	1	20	mg/kg	02.09.2021 14:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3150534

MB Sample Id: 7721148-1-BLK

Matrix: Solid

LCS Sample Id: 7721148-1-BKS

Prep Method: E300P

Date Prep: 02.09.2021

LCSD Sample Id: 7721148-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	255	102	252	101	90-110	1	20	mg/kg	02.09.2021 17:16	

Analytical Method: Chloride by EPA 300

Seq Number: 3150531

Parent Sample Id: 687598-022

Matrix: Soil

MS Sample Id: 687598-022 S

Prep Method: E300P

Date Prep: 02.09.2021

MSD Sample Id: 687598-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1000	250	1220	88	1220	88	90-110	0	20	mg/kg	02.09.2021 14:25	X

Analytical Method: Chloride by EPA 300

Seq Number: 3150531

Parent Sample Id: 687598-032

Matrix: Soil

MS Sample Id: 687598-032 S

Prep Method: E300P

Date Prep: 02.09.2021

MSD Sample Id: 687598-032 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	78.4	252	345	106	343	105	90-110	1	20	mg/kg	02.09.2021 15:40	

Analytical Method: Chloride by EPA 300

Seq Number: 3150534

Parent Sample Id: 687603-006

Matrix: Soil

MS Sample Id: 687603-006 S

Prep Method: E300P

Date Prep: 02.09.2021

MSD Sample Id: 687603-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	49.5	252	360	123	323	109	90-110	11	20	mg/kg	02.09.2021 17:35	X

Analytical Method: Chloride by EPA 300

Seq Number: 3150534

Parent Sample Id: 687758-001

Matrix: Soil

MS Sample Id: 687758-001 S

Prep Method: E300P

Date Prep: 02.09.2021

MSD Sample Id: 687758-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	937	249	1120	73	1120	73	90-110	0	20	mg/kg	02.09.2021 19:02	X

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Larson and Associates, Inc.
 Salado Draw Pad 10
Analytical Method: TPH by SW8015 Mod

Seq Number: 3150314

MB Sample Id: 7721032-1-BLK

Matrix: Solid

LCS Sample Id: 7721032-1-BKS

Prep Method: SW8015P

Date Prep: 02.08.2021

LCSD Sample Id: 7721032-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1090	109	1090	109	70-130	0	20	mg/kg	02.08.2021 11:47	
Diesel Range Organics (DRO)	<50.0	1000	1100	110	1200	120	70-130	9	20	mg/kg	02.08.2021 11:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		118		122		70-130	%	02.08.2021 11:47
o-Terphenyl	116		113		128		70-130	%	02.08.2021 11:47

Analytical Method: TPH by SW8015 Mod

Seq Number: 3150579

MB Sample Id: 7721181-1-BLK

Matrix: Solid

LCS Sample Id: 7721181-1-BKS

Prep Method: SW8015P

Date Prep: 02.09.2021

LCSD Sample Id: 7721181-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	934	93	948	95	70-130	1	20	mg/kg	02.09.2021 16:38	
Diesel Range Organics (DRO)	<50.0	1000	881	88	897	90	70-130	2	20	mg/kg	02.09.2021 16:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		89		91		70-130	%	02.09.2021 16:38
o-Terphenyl	112		92		93		70-130	%	02.09.2021 16:38

Analytical Method: TPH by SW8015 Mod

Seq Number: 3150314

Matrix: Solid

MB Sample Id: 7721032-1-BLK

Prep Method: SW8015P

Date Prep: 02.08.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.08.2021 11:26	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3150579

Matrix: Solid

MB Sample Id: 7721181-1-BLK

Prep Method: SW8015P

Date Prep: 02.09.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.09.2021 16:16	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Larson and Associates, Inc.
 Salado Draw Pad 10
Analytical Method: TPH by SW8015 Mod

Seq Number: 3150314

Parent Sample Id: 687338-001

Matrix: Soil

MS Sample Id: 687338-001 S

Prep Method: SW8015P

Date Prep: 02.08.2021

MSD Sample Id: 687338-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	1150	115	1020	102	70-130	12	20	mg/kg	02.08.2021 12:50	
Diesel Range Organics (DRO)	<49.9	998	1170	117	1090	109	70-130	7	20	mg/kg	02.08.2021 12:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		111		70-130	%	02.08.2021 12:50
o-Terphenyl	120		103		70-130	%	02.08.2021 12:50

Analytical Method: TPH by SW8015 Mod

Seq Number: 3150579

Parent Sample Id: 687603-001

Matrix: Soil

MS Sample Id: 687603-001 S

Prep Method: SW8015P

Date Prep: 02.09.2021

MSD Sample Id: 687603-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	986	99	1010	101	70-130	2	20	mg/kg	02.09.2021 17:42	
Diesel Range Organics (DRO)	<50.0	999	873	87	898	90	70-130	3	20	mg/kg	02.09.2021 17:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		87		70-130	%	02.09.2021 17:42
o-Terphenyl	82		84		70-130	%	02.09.2021 17:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3150521

MB Sample Id: 7721167-1-BLK

Matrix: Solid

LCS Sample Id: 7721167-1-BKS

Prep Method: SW5035A

Date Prep: 02.09.2021

LCSD Sample Id: 7721167-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0914	91	0.0953	95	70-130	4	35	mg/kg	02.09.2021 13:15	
Toluene	<0.00200	0.100	0.0878	88	0.0912	91	70-130	4	35	mg/kg	02.09.2021 13:15	
Ethylbenzene	<0.00200	0.100	0.0939	94	0.0973	97	70-130	4	35	mg/kg	02.09.2021 13:15	
m,p-Xylenes	<0.00400	0.200	0.185	93	0.193	97	70-130	4	35	mg/kg	02.09.2021 13:15	
o-Xylene	<0.00200	0.100	0.0912	91	0.0958	96	70-130	5	35	mg/kg	02.09.2021 13:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		101		102		70-130	%	02.09.2021 13:15
4-Bromofluorobenzene	97		99		98		70-130	%	02.09.2021 13:15

MS/MSD Percent Recovery
 Relative Percent Difference
 LCS/LCSD Recovery
 Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Larson and Associates, Inc.
Salado Draw Pad 10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3150567

Matrix: Solid

Prep Method: SW5035A

Date Prep: 02.09.2021

MB Sample Id: 7721178-1-BLK

LCS Sample Id: 7721178-1-BKS

LCSD Sample Id: 7721178-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0988	99	0.112	112	70-130	13	35	mg/kg	02.10.2021 05:15	
Toluene	<0.00200	0.100	0.0998	100	0.109	109	70-130	9	35	mg/kg	02.10.2021 05:15	
Ethylbenzene	<0.00200	0.100	0.0969	97	0.106	106	70-130	9	35	mg/kg	02.10.2021 05:15	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.209	105	70-130	10	35	mg/kg	02.10.2021 05:15	
o-Xylene	<0.00200	0.100	0.0945	95	0.106	106	70-130	11	35	mg/kg	02.10.2021 05:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	72		84		103		70-130	%	02.10.2021 05:15
4-Bromofluorobenzene	88		92		102		70-130	%	02.10.2021 05:15

Analytical Method: BTEX by EPA 8021B

Seq Number: 3150727

Matrix: Solid

Prep Method: SW5035A

Date Prep: 02.10.2021

MB Sample Id: 7721295-1-BLK

LCS Sample Id: 7721295-1-BKS

LCSD Sample Id: 7721295-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.102	102	0.0845	85	70-130	19	35	mg/kg	02.10.2021 19:27	
Toluene	<0.00200	0.100	0.103	103	0.0871	87	70-130	17	35	mg/kg	02.10.2021 19:27	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0850	85	70-130	17	35	mg/kg	02.10.2021 19:27	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.169	85	70-130	17	35	mg/kg	02.10.2021 19:27	
o-Xylene	<0.00200	0.100	0.101	101	0.0894	89	70-130	12	35	mg/kg	02.10.2021 19:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	73		84		73		70-130	%	02.10.2021 19:27
4-Bromofluorobenzene	89		94		86		70-130	%	02.10.2021 19:27

Analytical Method: BTEX by EPA 8021B

Seq Number: 3150521

Matrix: Soil

Prep Method: SW5035A

Date Prep: 02.09.2021

Parent Sample Id: 687306-017

MS Sample Id: 687306-017 S

MSD Sample Id: 687306-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00208	0.0994	0.0616	60	0.0557	54	70-130	10	35	mg/kg	02.09.2021 13:56	X
Toluene	0.0165	0.0994	0.0710	55	0.0603	44	70-130	16	35	mg/kg	02.09.2021 13:56	X
Ethylbenzene	0.00419	0.0994	0.0807	77	0.0658	62	70-130	20	35	mg/kg	02.09.2021 13:56	X
m,p-Xylenes	0.00949	0.199	0.167	79	0.136	64	70-130	20	35	mg/kg	02.09.2021 13:56	X
o-Xylene	0.00294	0.0994	0.0801	78	0.0665	64	70-130	19	35	mg/kg	02.09.2021 13:56	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	84		83		70-130	%	02.09.2021 13:56
4-Bromofluorobenzene	109		109		70-130	%	02.09.2021 13:56

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Larson and Associates, Inc.
 Salado Draw Pad 10
Analytical Method: BTEX by EPA 8021B

Seq Number: 3150567

Parent Sample Id: 687603-004

Matrix: Soil

MS Sample Id: 687603-004 S

Prep Method: SW5035A

Date Prep: 02.09.2021

MSD Sample Id: 687603-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0798	80	0.0859	86	70-130	7	35	mg/kg	02.10.2021 06:06	
Toluene	<0.00199	0.0994	0.0815	82	0.0871	88	70-130	7	35	mg/kg	02.10.2021 06:06	
Ethylbenzene	<0.00199	0.0994	0.0809	81	0.0854	86	70-130	5	35	mg/kg	02.10.2021 06:06	
m,p-Xylenes	<0.00398	0.199	0.159	80	0.168	84	70-130	6	35	mg/kg	02.10.2021 06:06	
o-Xylene	<0.00199	0.0994	0.0803	81	0.0850	86	70-130	6	35	mg/kg	02.10.2021 06:06	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		104		70-130	%	02.10.2021 06:06
4-Bromofluorobenzene	104		109		70-130	%	02.10.2021 06:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3150727

Parent Sample Id: 687930-013

Matrix: Soil

MS Sample Id: 687930-013 S

Prep Method: SW5035A

Date Prep: 02.10.2021

MSD Sample Id: 687930-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0805	81	0.0838	84	70-130	4	35	mg/kg	02.10.2021 20:20	
Toluene	<0.00200	0.100	0.0837	84	0.0864	86	70-130	3	35	mg/kg	02.10.2021 20:20	
Ethylbenzene	<0.00200	0.100	0.0823	82	0.0838	84	70-130	2	35	mg/kg	02.10.2021 20:20	
m,p-Xylenes	<0.00400	0.200	0.164	82	0.166	83	70-130	1	35	mg/kg	02.10.2021 20:20	
o-Xylene	<0.00200	0.100	0.0841	84	0.0842	84	70-130	0	35	mg/kg	02.10.2021 20:20	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	75		81		70-130	%	02.10.2021 20:20
4-Bromofluorobenzene	97		101		70-130	%	02.10.2021 20:20

MS/MSD Percent Recovery
 Relative Percent Difference
 LCS/LCSD Recovery
 Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.**Date/ Time Received:** 02.08.2021 10.13.00 AM**Work Order #:** 687603**Acceptable Temperature Range:** 0 - 6 degC**Air and Metal samples Acceptable Range:** Ambient**Temperature Measuring device used :** IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-2.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 02.08.2021

Checklist reviewed by:

Holly Taylor

Date: 02.08.2021

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: Chevron-Salado Draw Pad #10

Project Number: 19-0180-02

Location: NM

Lab Order Number: 9J23002



NELAP/TCEQ # T104704516-17-8

Report Date: 10/30/19

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-1 @ (0-1')	9J23002-01	Soil	10/21/19 12:00	10-23-2019 08:33
S-2 @ (0-1')	9J23002-02	Soil	10/21/19 12:02	10-23-2019 08:33
S-3 @ (0-1')	9J23002-03	Soil	10/21/19 12:11	10-23-2019 08:33
S-4 @ (0-1')	9J23002-04	Soil	10/21/19 12:15	10-23-2019 08:33
S-5 @ (0-1')	9J23002-05	Soil	10/21/19 12:20	10-23-2019 08:33
S-6 @ (0-1')	9J23002-06	Soil	10/21/19 12:21	10-23-2019 08:33
S-7 @ (0-1')	9J23002-07	Soil	10/21/19 12:22	10-23-2019 08:33

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

S-1 @ (0-1')
9J23002-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00108	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		98.0 %	75-125		P9J2303	10/23/19	10/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		96.9 %	75-125		P9J2303	10/23/19	10/23/19	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	18500	53.8	mg/kg dry	50	P9J2807	10/28/19	10/30/19	EPA 300.0	
% Moisture	7.0	0.1	%	1	P9J2403	10/24/19	10/24/19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.9	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		127 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: o-Terphenyl		133 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/23/19	10/25/19	calc	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

S-2 @ (0-1')
9J23002-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00108	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		97.4 %	75-125		P9J2303	10/23/19	10/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		96.8 %	75-125		P9J2303	10/23/19	10/23/19	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	5160	26.9	mg/kg dry	25	P9J2807	10/28/19	10/30/19	EPA 300.0	
% Moisture	7.0	0.1	%	1	P9J2403	10/24/19	10/24/19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.9	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		128 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: o-Terphenyl		134 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/23/19	10/25/19	calc	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

S-3 @ (0-1')
9J23002-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00109	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		94.8 %	75-125		P9J2303	10/23/19	10/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		94.3 %	75-125		P9J2303	10/23/19	10/23/19	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	5280	27.2	mg/kg dry	25	P9J2807	10/28/19	10/30/19	EPA 300.0	
% Moisture	8.0	0.1	%	1	P9J2403	10/24/19	10/24/19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	27.2	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		122 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: o-Terphenyl		128 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	10/23/19	10/25/19	calc	

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

S-4 @ (0-1')
9J23002-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00105	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P9J2303	10/23/19	10/23/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		94.7 %	75-125		P9J2303	10/23/19	10/23/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		98.3 %	75-125		P9J2303	10/23/19	10/23/19	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	484	1.05	mg/kg dry	1	P9J2807	10/28/19	10/30/19	EPA 300.0	
% Moisture	5.0	0.1	%	1	P9J2403	10/24/19	10/24/19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.3	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		127 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: o-Terphenyl		136 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/23/19	10/25/19	calc	

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

S-5 @ (0-1')
9J23002-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00106	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		106 %	75-125		P9J2402	10/24/19	10/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		92.2 %	75-125		P9J2402	10/24/19	10/24/19	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	384	1.06	mg/kg dry	1	P9J2807	10/28/19	10/30/19	EPA 300.0	
% Moisture	6.0	0.1	%	1	P9J2403	10/24/19	10/24/19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.6	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		127 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: o-Terphenyl		136 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/23/19	10/25/19	calc	

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

S-6 @ (0-1')
9J23002-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00106	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		104 %	75-125		P9J2402	10/24/19	10/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		104 %	75-125		P9J2402	10/24/19	10/24/19	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	382	1.06	mg/kg dry	1	P9J2807	10/28/19	10/30/19	EPA 300.0	
% Moisture	6.0	0.1	%	1	P9J2403	10/24/19	10/24/19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.6	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		113 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: o-Terphenyl		121 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/23/19	10/25/19	calc	

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

S-7 @ (0-1')
9J23002-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00104	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P9J2402	10/24/19	10/24/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		88.1 %	75-125		P9J2402	10/24/19	10/24/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		98.9 %	75-125		P9J2402	10/24/19	10/24/19	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	525	1.04	mg/kg dry	1	P9J2807	10/28/19	10/30/19	EPA 300.0	
% Moisture	4.0	0.1	%	1	P9J2403	10/24/19	10/24/19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.0	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: 1-Chlorooctane		120 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	
Surrogate: o-Terphenyl		125 %	70-130		P9J2310	10/23/19	10/25/19	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/23/19	10/25/19	calc	

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9J2303 - General Preparation (GC)

Blank (P9J2303-BLK1)

Prepared & Analyzed: 10/23/19

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	0.119		"	0.120		99.0	75-125			
Surrogate: 1,4-Difluorobenzene	0.114		"	0.120		94.8	75-125			

LCS (P9J2303-BS1)

Prepared & Analyzed: 10/23/19

Benzene	0.0860	0.00100	mg/kg wet	0.100		86.0	70-130			
Toluene	0.104	0.00100	"	0.100		104	70-130			
Ethylbenzene	0.102	0.00100	"	0.100		102	70-130			
Xylene (p/m)	0.202	0.00200	"	0.200		101	70-130			
Xylene (o)	0.103	0.00100	"	0.100		103	70-130			
Surrogate: 1,4-Difluorobenzene	0.138		"	0.120		115	75-125			
Surrogate: 4-Bromofluorobenzene	0.131		"	0.120		109	75-125			

LCS Dup (P9J2303-BSD1)

Prepared & Analyzed: 10/23/19

Benzene	0.0938	0.00100	mg/kg wet	0.100		93.8	70-130	8.65	20	
Toluene	0.102	0.00100	"	0.100		102	70-130	1.57	20	
Ethylbenzene	0.104	0.00100	"	0.100		104	70-130	2.46	20	
Xylene (p/m)	0.207	0.00200	"	0.200		104	70-130	2.35	20	
Xylene (o)	0.111	0.00100	"	0.100		111	70-130	7.83	20	
Surrogate: 1,4-Difluorobenzene	0.136		"	0.120		113	75-125			
Surrogate: 4-Bromofluorobenzene	0.120		"	0.120		100	75-125			

Calibration Blank (P9J2303-CCB1)

Prepared & Analyzed: 10/23/19

Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.120		"	0.120		99.8	75-125			
Surrogate: 1,4-Difluorobenzene	0.111		"	0.120		92.6	75-125			

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9J2303 - General Preparation (GC)

Calibration Blank (P9J2303-CCB2)

Prepared & Analyzed: 10/23/19

Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	0.124		"	0.120		103	75-125			
Surrogate: 4-Bromofluorobenzene	0.116		"	0.120		96.5	75-125			

Calibration Blank (P9J2303-CCB3)

Prepared & Analyzed: 10/23/19

Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	0.111		"	0.120		92.6	75-125			
Surrogate: 4-Bromofluorobenzene	0.120		"	0.120		99.8	75-125			

Calibration Check (P9J2303-CCV1)

Prepared & Analyzed: 10/23/19

Benzene	0.0900	0.00100	mg/kg wet	0.100		90.0	80-120			
Toluene	0.0974	0.00100	"	0.100		97.4	80-120			
Ethylbenzene	0.105	0.00100	"	0.100		105	80-120			
Xylene (p/m)	0.193	0.00200	"	0.200		96.3	80-120			
Xylene (o)	0.107	0.00100	"	0.100		107	80-120			
Surrogate: 1,4-Difluorobenzene	0.130		"	0.120		109	75-125			
Surrogate: 4-Bromofluorobenzene	0.131		"	0.120		110	75-125			

Calibration Check (P9J2303-CCV2)

Prepared & Analyzed: 10/23/19

Benzene	0.0970	0.00100	mg/kg wet	0.100		97.0	80-120			
Toluene	0.102	0.00100	"	0.100		102	80-120			
Ethylbenzene	0.113	0.00100	"	0.100		113	80-120			
Xylene (p/m)	0.202	0.00200	"	0.200		101	80-120			
Xylene (o)	0.111	0.00100	"	0.100		111	80-120			
Surrogate: 4-Bromofluorobenzene	0.133		"	0.120		110	75-125			
Surrogate: 1,4-Difluorobenzene	0.136		"	0.120		113	75-125			

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9J2303 - General Preparation (GC)

Calibration Check (P9J2303-CCV3)

Prepared & Analyzed: 10/23/19

Benzene	0.0900	0.00100	mg/kg wet	0.100		90.0	80-120			
Toluene	0.0974	0.00100	"	0.100		97.4	80-120			
Ethylbenzene	0.105	0.00100	"	0.100		105	80-120			
Xylene (p/m)	0.193	0.00200	"	0.200		96.3	80-120			
Xylene (o)	0.107	0.00100	"	0.100		107	80-120			
Surrogate: 4-Bromofluorobenzene	0.131		"	0.120		110	75-125			
Surrogate: 1,4-Difluorobenzene	0.130		"	0.120		109	75-125			

Matrix Spike (P9J2303-MS1)

Source: 9J22005-01

Prepared & Analyzed: 10/23/19

Benzene	0.0552	0.00103	mg/kg dry	0.103	ND	53.6	80-120			QM-05
Toluene	0.0643	0.00103	"	0.103	ND	62.4	80-120			QM-05
Ethylbenzene	0.0835	0.00103	"	0.103	ND	81.0	80-120			
Xylene (p/m)	0.125	0.00206	"	0.206	ND	60.5	80-120			QM-05
Xylene (o)	0.0600	0.00103	"	0.103	ND	58.2	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	0.146		"	0.124		118	75-125			
Surrogate: 4-Bromofluorobenzene	0.136		"	0.124		110	75-125			

Matrix Spike Dup (P9J2303-MSD1)

Source: 9J22005-01

Prepared & Analyzed: 10/23/19

Benzene	0.0498	0.00103	mg/kg dry	0.103	ND	48.3	80-120	10.4	20	QM-05
Toluene	0.0539	0.00103	"	0.103	ND	52.3	80-120	17.7	20	QM-05
Ethylbenzene	0.0667	0.00103	"	0.103	ND	64.7	80-120	22.4	20	QM-05
Xylene (p/m)	0.103	0.00206	"	0.206	ND	49.8	80-120	19.4	20	QM-05
Xylene (o)	0.0469	0.00103	"	0.103	ND	45.4	80-120	24.6	20	QM-05
Surrogate: 1,4-Difluorobenzene	0.145		"	0.124		117	75-125			
Surrogate: 4-Bromofluorobenzene	0.125		"	0.124		101	75-125			

Batch P9J2402 - General Preparation (GC)

Blank (P9J2402-BLK1)

Prepared & Analyzed: 10/24/19

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	0.143		"	0.120		119	75-125			
Surrogate: 1,4-Difluorobenzene	0.117		"	0.120		97.6	75-125			

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9J2402 - General Preparation (GC)

LCS (P9J2402-BS1)

Prepared & Analyzed: 10/24/19

Benzene	0.0970	0.00100	mg/kg wet	0.100		97.0	70-130			
Toluene	0.103	0.00100	"	0.100		103	70-130			
Ethylbenzene	0.109	0.00100	"	0.100		109	70-130			
Xylene (p/m)	0.212	0.00200	"	0.200		106	70-130			
Xylene (o)	0.0976	0.00100	"	0.100		97.6	70-130			
Surrogate: 1,4-Difluorobenzene	0.133		"	0.120		110	75-125			
Surrogate: 4-Bromofluorobenzene	0.124		"	0.120		103	75-125			

LCS Dup (P9J2402-BSD1)

Prepared & Analyzed: 10/24/19

Benzene	0.0906	0.00100	mg/kg wet	0.100		90.6	70-130	6.81	20	
Toluene	0.109	0.00100	"	0.100		109	70-130	5.54	20	
Ethylbenzene	0.102	0.00100	"	0.100		102	70-130	6.09	20	
Xylene (p/m)	0.199	0.00200	"	0.200		99.6	70-130	6.15	20	
Xylene (o)	0.101	0.00100	"	0.100		101	70-130	2.95	20	
Surrogate: 4-Bromofluorobenzene	0.136		"	0.120		113	75-125			
Surrogate: 1,4-Difluorobenzene	0.130		"	0.120		108	75-125			

Calibration Blank (P9J2402-CCB1)

Prepared & Analyzed: 10/24/19

Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.122		"	0.120		102	75-125			
Surrogate: 1,4-Difluorobenzene	0.117		"	0.120		97.3	75-125			

Calibration Blank (P9J2402-CCB2)

Prepared & Analyzed: 10/24/19

Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	0.123		"	0.120		103	75-125			
Surrogate: 4-Bromofluorobenzene	0.121		"	0.120		101	75-125			

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9J2402 - General Preparation (GC)

Calibration Blank (P9J2402-CCB3)

Prepared & Analyzed: 10/24/19

Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.110		"	0.120		91.3	75-125			
Surrogate: 1,4-Difluorobenzene	0.123		"	0.120		103	75-125			

Calibration Check (P9J2402-CCV1)

Prepared & Analyzed: 10/24/19

Benzene	0.0968	0.00100	mg/kg wet	0.100		96.8	80-120			
Toluene	0.106	0.00100	"	0.100		106	80-120			
Ethylbenzene	0.116	0.00100	"	0.100		116	80-120			
Xylene (p/m)	0.219	0.00200	"	0.200		109	80-120			
Xylene (o)	0.120	0.00100	"	0.100		120	80-120			
Surrogate: 4-Bromofluorobenzene	0.109		"	0.120		90.9	75-125			
Surrogate: 1,4-Difluorobenzene	0.134		"	0.120		112	75-125			

Calibration Check (P9J2402-CCV2)

Prepared & Analyzed: 10/24/19

Benzene	0.0819	0.00100	mg/kg wet	0.100		81.9	80-120			
Toluene	0.0853	0.00100	"	0.100		85.3	80-120			
Ethylbenzene	0.0988	0.00100	"	0.100		98.8	80-120			
Xylene (p/m)	0.161	0.00200	"	0.200		80.6	80-120			
Xylene (o)	0.0845	0.00100	"	0.100		84.5	80-120			
Surrogate: 4-Bromofluorobenzene	0.119		"	0.120		99.0	75-125			
Surrogate: 1,4-Difluorobenzene	0.131		"	0.120		109	75-125			

Calibration Check (P9J2402-CCV3)

Prepared & Analyzed: 10/24/19

Benzene	0.0910	0.00100	mg/kg wet	0.100		91.0	80-120			
Toluene	0.0918	0.00100	"	0.100		91.8	80-120			
Ethylbenzene	0.105	0.00100	"	0.100		105	80-120			
Xylene (p/m)	0.182	0.00200	"	0.200		91.0	80-120			
Xylene (o)	0.104	0.00100	"	0.100		104	80-120			
Surrogate: 4-Bromofluorobenzene	0.111		"	0.120		92.3	75-125			
Surrogate: 1,4-Difluorobenzene	0.138		"	0.120		115	75-125			

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Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9J2402 - General Preparation (GC)

Matrix Spike (P9J2402-MS1)		Source: 9J23005-01		Prepared & Analyzed: 10/24/19						
Benzene	0.0494	0.00101	mg/kg dry	0.101	ND	48.9	80-120			QM-05
Toluene	0.0383	0.00101	"	0.101	ND	37.9	80-120			QM-05
Ethylbenzene	0.0313	0.00101	"	0.101	ND	31.0	80-120			QM-05
Xylene (p/m)	0.0457	0.00202	"	0.202	ND	22.6	80-120			QM-05
Xylene (o)	0.0238	0.00101	"	0.101	ND	23.5	80-120			QM-05
Surrogate: 4-Bromofluorobenzene	0.102		"	0.121		84.1	75-125			
Surrogate: 1,4-Difluorobenzene	0.137		"	0.121		113	75-125			

Matrix Spike Dup (P9J2402-MSD1)		Source: 9J23005-01		Prepared & Analyzed: 10/24/19						
Benzene	0.0554	0.00101	mg/kg dry	0.101	ND	54.8	80-120	11.3	20	QM-05
Toluene	0.0488	0.00101	"	0.101	ND	48.3	80-120	24.0	20	QM-05
Ethylbenzene	0.0468	0.00101	"	0.101	ND	46.4	80-120	39.8	20	QM-05
Xylene (p/m)	0.0594	0.00202	"	0.202	ND	29.4	80-120	26.1	20	QM-05
Xylene (o)	0.0307	0.00101	"	0.101	ND	30.4	80-120	25.4	20	QM-05
Surrogate: 1,4-Difluorobenzene	0.138		"	0.121		114	75-125			
Surrogate: 4-Bromofluorobenzene	0.112		"	0.121		92.2	75-125			

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9J2403 - * DEFAULT PREP *******Blank (P9J2403-BLK1)**

Prepared & Analyzed: 10/24/19

% Moisture	ND	0.1	%
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Duplicate (P9J2403-DUP1)

Source: 9J23001-09

Prepared & Analyzed: 10/24/19

% Moisture	8.0	0.1	%	8.0	0.00	20
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Duplicate (P9J2403-DUP2)

Source: 9J23006-03

Prepared & Analyzed: 10/24/19

% Moisture	8.0	0.1	%	8.0	0.00	20
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Duplicate (P9J2403-DUP3)

Source: 9J23006-05

Prepared & Analyzed: 10/24/19

% Moisture	10.0	0.1	%	9.0	10.5	20
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Batch P9J2807 - * DEFAULT PREP *******Blank (P9J2807-BLK1)**

Prepared: 10/28/19 Analyzed: 10/29/19

Chloride	ND	0.100	mg/kg wet
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LCS (P9J2807-BS1)

Prepared: 10/28/19 Analyzed: 10/29/19

Chloride	436	1.00	mg/kg wet	400	109	80-120
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LCS Dup (P9J2807-BSD1)

Prepared: 10/28/19 Analyzed: 10/29/19

Chloride	442	1.00	mg/kg wet	400	110	80-120	1.25	20
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Calibration Blank (P9J2807-CCB1)

Prepared: 10/28/19 Analyzed: 10/29/19

Chloride	0.00		mg/kg wet
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Calibration Blank (P9J2807-CCB2)

Prepared: 10/28/19 Analyzed: 10/29/19

Chloride	0.00		mg/kg wet
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Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P9J2807 - *** DEFAULT PREP ***										
Calibration Check (P9J2807-CCV1)				Prepared: 10/28/19 Analyzed: 10/29/19						
Chloride	21.2		mg/kg	20.0		106	0-200			
Calibration Check (P9J2807-CCV2)				Prepared: 10/28/19 Analyzed: 10/29/19						
Chloride	20.5		mg/kg	20.0		103	0-200			
Calibration Check (P9J2807-CCV3)				Prepared: 10/28/19 Analyzed: 10/30/19						
Chloride	20.9		mg/kg	20.0		105	0-200			
Matrix Spike (P9J2807-MS1)				Source: 9J22005-04		Prepared: 10/28/19 Analyzed: 10/29/19				
Chloride	1190	11.2	mg/kg dry	1120	2.84	105	80-120			
Matrix Spike (P9J2807-MS2)				Source: 9J22005-13		Prepared: 10/28/19 Analyzed: 10/30/19				
Chloride	745	5.38	mg/kg dry	538	223	97.2	80-120			
Matrix Spike Dup (P9J2807-MSD1)				Source: 9J22005-04		Prepared: 10/28/19 Analyzed: 10/29/19				
Chloride	1140	11.2	mg/kg dry	1120	2.84	101	80-120	4.32	20	
Matrix Spike Dup (P9J2807-MSD2)				Source: 9J22005-13		Prepared: 10/28/19 Analyzed: 10/30/19				
Chloride	765	5.38	mg/kg dry	538	223	101	80-120	2.66	20	

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9J2310 - TX 1005

Blank (P9J2310-BLK1)

Prepared: 10/23/19 Analyzed: 10/25/19

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	130		"	100		130	70-130			
Surrogate: o-Terphenyl	66.8		"	50.0		134	70-130			S-GC

LCS (P9J2310-BS1)

Prepared: 10/23/19 Analyzed: 10/25/19

C6-C12	976	25.0	mg/kg wet	1000		97.6	75-125			
>C12-C28	974	25.0	"	1000		97.4	75-125			
Surrogate: 1-Chlorooctane	122		"	100		122	70-130			
Surrogate: o-Terphenyl	61.8		"	50.0		124	70-130			

LCS Dup (P9J2310-BSD1)

Prepared: 10/23/19 Analyzed: 10/25/19

C6-C12	979	25.0	mg/kg wet	1000		97.9	75-125	0.372	20	
>C12-C28	951	25.0	"	1000		95.1	75-125	2.33	20	
Surrogate: 1-Chlorooctane	118		"	100		118	70-130			
Surrogate: o-Terphenyl	62.8		"	50.0		126	70-130			

Calibration Blank (P9J2310-CCB1)

Prepared: 10/23/19 Analyzed: 10/25/19

C6-C12	8.74		mg/kg wet							
>C12-C28	7.53		"							
Surrogate: 1-Chlorooctane	116		"	100		116	70-130			
Surrogate: o-Terphenyl	61.7		"	50.0		123	70-130			

Calibration Check (P9J2310-CCV1)

Prepared: 10/23/19 Analyzed: 10/25/19

C6-C12	521	25.0	mg/kg wet	500		104	85-115			
>C12-C28	572	25.0	"	500		114	85-115			
Surrogate: 1-Chlorooctane	120		"	100		120	70-130			
Surrogate: o-Terphenyl	62.0		"	50.0		124	70-130			

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9J2310 - TX 1005

Calibration Check (P9J2310-CCV2)

Prepared: 10/23/19 Analyzed: 10/25/19

C6-C12	982	25.0	mg/kg wet	1000		98.2	85-115			
>C12-C28	935	25.0	"	1000		93.5	85-115			
Surrogate: 1-Chlorooctane	115		"	100		115	70-130			
Surrogate: o-Terphenyl	58.4		"	50.0		117	70-130			

Calibration Check (P9J2310-CCV3)

Prepared: 10/23/19 Analyzed: 10/25/19

C6-C12	529	25.0	mg/kg wet	500		106	85-115			
>C12-C28	500	25.0	"	500		99.9	85-115			
Surrogate: 1-Chlorooctane	121		"	100		121	70-130			
Surrogate: o-Terphenyl	61.0		"	50.0		122	70-130			

Matrix Spike (P9J2310-MS1)

Source: 9J23002-07

Prepared: 10/23/19 Analyzed: 10/25/19

C6-C12	1000	26.0	mg/kg dry	1040	16.0	94.8	75-125			
>C12-C28	987	26.0	"	1040	11.4	93.7	75-125			
Surrogate: 1-Chlorooctane	115		"	104		111	70-130			
Surrogate: o-Terphenyl	53.8		"	52.1		103	70-130			

Matrix Spike Dup (P9J2310-MSD1)

Source: 9J23002-07

Prepared: 10/23/19 Analyzed: 10/25/19

C6-C12	995	26.0	mg/kg dry	1040	16.0	94.0	75-125	0.864	20	
>C12-C28	999	26.0	"	1040	11.4	94.8	75-125	1.24	20	
Surrogate: 1-Chlorooctane	124		"	104		119	70-130			
Surrogate: o-Terphenyl	54.0		"	52.1		104	70-130			

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Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Chevron-Salado Draw Pad #10
Project Number: 19-0180-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

10/30/2019

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

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Midland TX, 79710

Project Manager: Mark Larson

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Laarson & Associates, Inc.
Environmental Consultants

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

Data Reported to:

DATE: 10/22/2019 PAGE 1 OF 1
PO#: LAB WORK ORDER# 9523002
PROJECT LOCATION OR NAME: Chevron - Salvador Drua Rd #
LAI PROJECT #: 19-080-02 COLLECTOR: KO/EC

CHAIN-OF-CUSTODY

- NO 0752

Page 22 of 22

Received by OCD: 4/1/2021 11:30:24 AM

TRRP report?		S=SOIL W=WATER A=AIR		P=PAINT SL=SLUDGE OT=OTHER		TIME ZONE: Time zone/State:		PRESERVATION		ANALYSES		FIELD NOTES																			
Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO ₃	H ₂ SO ₄ ☐ NaOH ☐	ICE	UNPRESERVED	BTX ☐ MTBE ☐	TPH 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 - PEST ☐	TOTAL METALS (RCRA) ☐	LEAD - TOTAL ☐	RCI ☐	TDS ☐	pH ☐	EXPLOSIVES ☐	CHLORIDE ☐	ANIONS ☐	ALKALINITY ☐	
S-1 (D-1)	1	10/21	12:00	S	1				X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S-2 (D-1)	2		12:02																												
S-3 (D-1)	3		12:11																												
S-4 (D-1)	4		12:15																												
S-5 (D-1)	5		12:20																												
S-6 (D-1)	6		12:21																												
S-7 (D-1)	7		12:22																												
TOTAL																															

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

LABORATORY:

TURN AROUND TIME

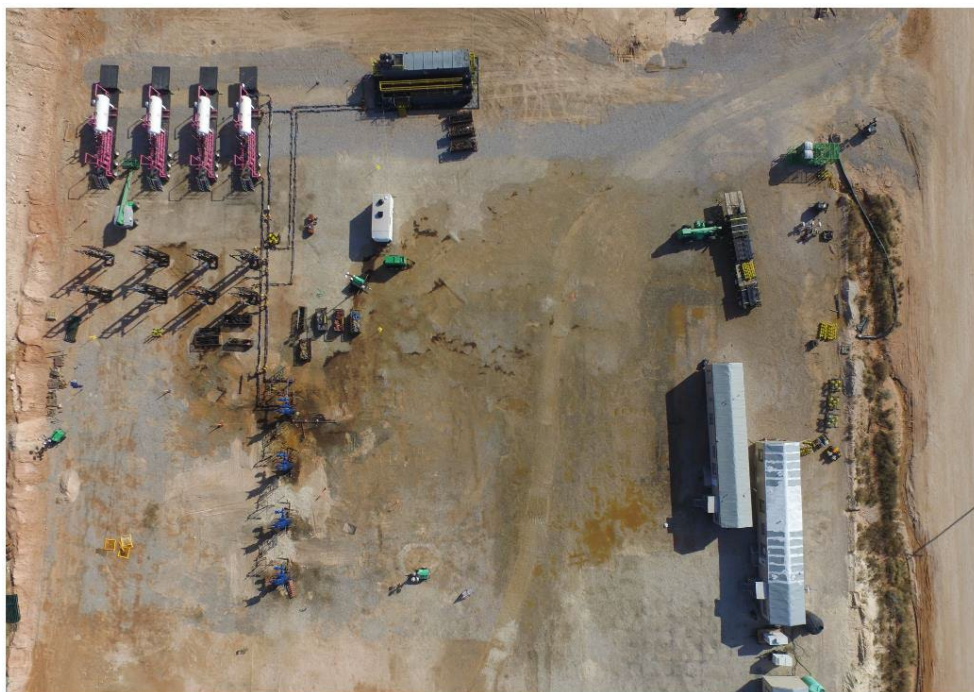
NORMAL ☒1 DAY ☐2 DAY ☐OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 30/40 THERM#:L2051CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED☐ CARRIER BILL #☐ HAND DELIVERED

Appendix E
Photographs

Tracking Number: nCS2003139174
Delineation Report and Remediation Plan
Salado Draw Pad #10 Well 20H
Eddy County, New Mexico
March 17, 2021



Drone Image of Impacted Area



Impacted area viewing southwest, July 17, 2020

Tracking Number: nCS2003139174
Delineation Report and Remediation Plan
Salado Draw Pad #10 Well 20H
Eddy County, New Mexico
March 17, 2021



Impacted area viewing northwest, July 17, 2020



Impacted area viewing north, July 17, 2020

Tracking Number: nCS2003139174
Delineation Report and Remediation Plan
Salado Draw Pad #10 Well 20H
Eddy County, New Mexico
March 17, 2021



Impacted area viewing southeast, July 17, 2020

Incident ID	nCS2003139174
District RP	
Facility ID	
Application ID	

Remediation Plan

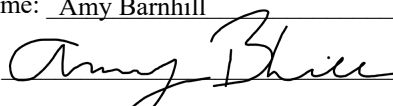
Remediation Plan Checklist: Each of the following items must be included in the plan.

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

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

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

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

Printed Name: Amy Barnhill Title: Waste and Water Specialist
Signature:  Date: 4-1-21
email: ABarnhill@chevron.com Telephone: 432-687-7108

OCD Only

Received by: Robert Hamlet Date: 7/8/2021

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

Signature:  Date: 7/8/2021

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 22553

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 22553
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	The Workplan/Remediation Plan is approved with the following conditions: When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less. Please make sure all groundwater data is included in closure report summary. Soil contamination levels need to meet closure criteria standards for proven depth to water determination. Please make sure the contaminated material not meeting OCD closure criteria standards is delineated, removed, and hauled off site to a division-approved facility.	7/8/2021